U8131-1 A

OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF OKLAHOMA

CONGRESSIONAL INFO. SERVICE/SRI
ATTN: ROBERTA E. MASON
4520 EAST-WEST HIGHWAY
BETHESDA MD 20814

ISSN 0030-1671

November 1989

VOL. 57, ISSUE 11

SUMMARY OF INDICATORS

Category	8 Mos. '89	8 Mos. '88	Aug. '89	Percentage Change 8 Mos. '89/'88	Percentage Change Aug./July '89
Personal Income (Monthly Average)					
Unadjusted ($000,000)	3,786	3,574	3,854	5.9	1.6
Adjusted for CPI ($000,000)	3,076	3,047	3,098	1.0	0.4
Crude Oil Production (000 bbl)	72,708	80,461	8,801	-9.4	-2.6
Natural Gas Production (000 mcf)[a]	1,394,899	1,410,805	157,147	-1.1	-11.2
Industrial Power Sales (000,000 Kwh)[b]	5,832	5,651	788	3.2	5.3
Total Bank Deposits (Monthly Average) ($000,000)[c]					
Demand	7,418	7,587	7,241	-2.2	-1.5
Savings	23,537	24,505	23,452	-3.9	0.1
Savings and Loan Associations ($000,000)					
Assets	10,667	10,421	10,114	2.4	-5.0
Mortgage Loans Closed	339	436	48	-22.4	19.4
Employment					
Total Labor Force (000)[d]	1,528.3	1,533.4	1,556.0	-0.3	-0.8
Total Employment (000)	1,436.8	1,424.3	1,479.6	0.9	-0.1
Unemployment Rate (%)	6.0	7.1	4.9	—	—
Wage and Salary Employment (000)	1,136.4	1,127.7	1,131.4	0.8	-0.4
General Business Index	96.2	94.6	98.1	1.7	-0.3

Note: Includes revisions.
[a] Natural Gas includes casinghead gas.
[b] Sales of larger privately owned utility companies.
[c] Total deposits of all depository institutions.
[d] Civilian Labor Force.

RETAIL TRADE IN SELECTED CITIES
($000)

City	Aug. '89 Adjusted	Aug. '89 Unadjusted	Adjusted '89/'88 8 Mos.	Adjusted 1989 Aug./July	City	Aug. '89 Adjusted	Aug. '89 Unadjusted	Adjusted '89/'88 8 Mos.	Adjusted 1989 Aug./July
Ada	13,846	14,248	-1.1	2.2	McAlester	8,947	9,125	-6.0	-6.9
Altus	11,482	11,644	-5.6	-3.2	Miami	10,960	10,756	-4.8	2.3
Alva	3,394	3,565	-6.7	-8.9	Midwest City	33,580	33,764	-4.6	-2.8
Anadarko	4,261	4,580	-4.2	-18.4	Moore	11,719	11,882	-10.2	-4.1
Ardmore	17,629	18,340	-4.6	-4.2	Muskogee	27,987	28,633	-1.3	-2.7
Bartlesville	19,481	19,934	0.0	3.2	Norman	58,183	61,053	-4.6	-2.5
Blackwell	3,092	3,158	-6.9	-6.7	Oklahoma City	261,817	262,954	-3.6	1.5
Broken Arrow	18,747	18,769	-1.7	-5.0	Okmulgee	4,765	4,928	-5.4	-9.4
Chickasha	8,832	8,859	-5.5	-1.3	Pauls Valley	3,848	3,986	-4.4	-9.2
Clinton	5,691	5,797	-7.0	-7.6	Pawhuska	1,415	1,580	-2.6	-25.3
Cushing	5,044	4,958	-7.4	-1.3	Ponca City	16,538	16,887	1.5	-1.7
Del City	10,581	10,927	-4.6	5.1	Poteau	4,351	4,399	-5.0	2.2
Duncan	13,236	13,520	-11.2	-0.8	Sand Springs	8,470	8,604	0.5	-5.3
Durant	8,471	8,859	-6.8	-17.9	Sapulpa	11,734	11,944	-2.9	-5.6
Edmond	23,665	25,093	1.4	-9.9	Seminole	5,229	5,393	-7.1	-7.8
Elk City	7,053	7,362	-4.3	-4.4	Shawnee	26,138	26,270	2.5	-1.3
El Reno	7,481	7,645	-0.9	-5.2	Stillwater	24,108	27,577	-1.3	-0.6
Guthrie	4,517	4,869	-6.0	11.2	Tahlequah	7,324	7,659	-1.7	-2.1
Guymon	4,394	4,572	-0.4	-3.5	Tulsa	244,791	247,817	-1.8	0.0
Henryetta	4,125	4,357	-5.6	-17.5	Watonga	1,569	1,689	1.1	-21.3
Hobart	2,087	2,128	-6.7	-0.8	Weatherford	5,356	5,606	-1.9	-0.8
Holdenville	2,465	2,501	-8.5	3.4	Wewoka	978	988	-7.0	-9.9
Hugo	2,503	2,512	-6.1	-1.0	Woodward	10,547	10,891	-4.8	-2.7
Idabel	3,473	3,709	2.8	-5.4					
Lawton	41,708	42,129	-6.1	-8.8	**Total**	1,037,615	1,058,420	-3.2	-1.7

RETAIL TRADE IN METRO AREAS AND STATE
($000)

	8 Mos. '89	8 Mos. '88	Aug. '89		Percentage Change		
					8 Mos. '89/'88	Aug./July '89	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	1,643,800	1,537,471	202,813	208,492	6.9	-10.6	-9.0
Apparel	117,719	115,860	16,011	15,377	1.6	5.0	16.4
General Merchandise Group	510,797	503,631	60,572	59,343	1.4	4.4	15.0
Furniture & Appliances	179,733	160,029	21,924	22,163	12.3	5.3	10.5
Lumber & Building Materials	105,026	118,772	12,796	14,372	-11.6	4.8	4.4
Auto Dealers	1,044,029	1,262,632	123,176	124,485	-17.3	2.1	-7.6
Service Stations	145,428	135,006	16,168	17,357	7.7	-11.7	-13.4
All Other	498,217	506,683	69,462	73,313	-1.7	12.4	22.7
Total	4,244,749	4,340,084	522,922	534,902	-2.2	-2.1	-1.3
TULSA MSA							
Food Group	949,355	898,889	119,118	124,149	5.6	-10.0	-8.4
Apparel	101,601	106,451	13,466	13,924	-4.6	-0.6	23.2
General Merchandise Group	463,329	439,793	62,221	61,266	5.4	3.1	10.0
Furniture & Appliances	104,486	103,586	14,457	13,224	0.9	1.2	-10.8
Lumber & Building Materials	95,146	88,639	12,418	13,151	7.3	12.9	5.7
Auto Dealers	607,462	734,651	71,669	72,431	-17.3	2.1	-7.6
Service Stations	119,480	110,918	13,283	14,260	7.7	-11.7	-13.4
All Other	85,266	91,670	11,083	11,611	-7.0	50.8	28.9
Total	2,526,125	2,574,597	317,715	324,016	-1.9	-2.0	-2.9
ENID MSA							
Food Group	79,274	73,697	10,838	11,163	7.6	9.4	7.4
Apparel	10,859	10,755	1,466	1,347	1.0	10.6	-4.5
General Merchandise Group	34,216	34,020	4,395	4,267	0.6	-0.3	2.1
Furniture & Appliances	7,913	8,455	936	906	-6.4	0.5	-0.5
Lumber & Building Materials	11,209	10,694	1,513	1,571	4.8	0.3	-18.3
Auto Dealers	59,747	72,266	7,049	7,124	-17.3	2.1	-7.6
Service Stations	10,721	9,949	1,192	1,280	7.8	-11.7	-13.4
All Other	23,141	23,411	2,694	2,791	-1.2	-3.5	2.2
Total	237,080	243,247	30,083	30,449	-2.5	3.3	-0.9
LAWTON MSA							
Food Group	124,021	126,635	12,048	12,984	-2.1	-37.4	-34.9
Apparel	14,383	14,301	1,915	2,002	0.6	11.0	25.9
General Merchandise Group	97,894	100,351	12,751	12,411	-2.4	4.7	10.8
Furniture & Appliances	17,898	19,101	2,183	2,138	-6.3	11.7	-4.7
Lumber & Building Materials	11,125	11,778	1,415	1,586	-5.5	4.2	2.5
Auto Dealers	79,632	96,301	9,395	9,495	-17.3	2.1	-7.6
Service Stations	7,317	6,794	813	873	7.7	-11.7	-13.4
All Other	25,230	25,468	3,061	2,859	-0.9	-9.9	-17.1
Total	377,500	400,729	43,581	44,348	-5.8	-12.8	-13.5
MUSKOGEE AREA							
Food Group	91,355	85,452	10,862	11,489	6.9	-6.0	-11.2
Apparel	16,096	13,927	2,335	2,305	15.6	15.7	18.8
General Merchandise Group	32,512	31,995	4,414	4,257	1.6	1.9	2.8
Furniture & Appliances	9,547	7,864	1,287	1,362	21.4	14.4	24.5
Lumber & Building Materials	3,157	2,880	450	490	9.6	14.8	5.2
Auto Dealers	50,163	60,687	5,921	5,987	-17.3	2.2	-7.6
Service Stations	9,385	8,701	1,042	1,120	7.9	-11.8	-13.4
All Other	21,841	22,873	2,758	2,910	-4.5	1.7	2.0
Total	234,056	234,379	29,069	29,069	-0.1	-0.2	-4.1
STATE[a]							
Durable Goods	3,826,990	4,389,850	480,046	492,424	-12.8	4.9	0.3
Auto Dealers	2,608,482	3,154,648	307,758	311,023	-17.3	2.1	-7.6
Accessory Dealers	227,561	220,313	29,346	31,896	3.3	10.1	11.0
Total Automotive	2,836,043	3,374,961	337,104	342,919	-16.0	2.7	-6.1
Furniture	259,860	226,585	47,615	49,790	14.7	52.5	62.6
Household Appliances	141,442	157,217	17,190	17,768	-10.0	0.7	5.1
Total Furniture and Appliances	401,302	383,802	64,805	67,558	4.6	34.2	42.2
Lumber and Building Materials	362,298	370,867	48,763	53,772	-2.3	6.5	6.2
Hardware Stores	45,729	44,329	5,998	5,902	3.2	5.6	3.7
Total Lumber, Building Materials & Hardware	408,027	415,196	54,761	59,674	-1.7	6.4	6.0
Nondurable Goods	7,427,250	7,110,878	914,024	952,157	4.4	-9.1	-4.7
Apparel	398,681	398,752	53,632	53,220	0.0	5.7	15.4
Drug Stores	346,460	329,737	44,130	42,514	5.1	3.1	6.0
Eating and Drinking Places	1,318,925	1,249,232	164,231	172,699	5.6	-3.7	-4.1
Food Group	3,016,728	2,897,166	361,163	383,799	4.1	-16.5	-12.8
Service Stations	477,559	443,298	53,095	56,999	7.7	-11.7	-13.4
General Merchandise Group	1,399,525	1,308,672	177,084	178,591	6.9	0.4	10.8
Total Retail Trade	11,254,240	11,500,728	1,394,070	1,444,581	-2.1	-4.7	-3.1

[a] Total includes data for categories not shown in the table.

ENID AND LAWTON MSAs
MUSKOGEE MA

Category	8 Mos. '89	8 Mos. '88	Aug. '89	Percentage Change 8 Mos. '89/'88	Percentage Change Aug./July '89
ENID MSA					
Employment (Number)					
Labor Force[a]	28,256	28,978	28,975	-2.5	-1.1
Total Employment	25,612	27,222	27,850	-5.9	-0.9
Unemployment Rate (%)	4.9	6.0	3.9	—	—
Wage and Salary Employment	21,200	21,600	21,300	-1.9	0.9
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	638	450	0	41.8	—
Number of Units	6	5	0	20.0	—
Residential—Multi Family					
Dollar Value ($000)	300	0	0	—	0.0
Number of Units	6	0	0	—	0.0
Nonresidential					
Commercial ($000)	1,416	768	150	84.4	-27.2
Industrial ($000)	159	0	159	—	—
Institutional ($000)	0	300	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	5,358	2,692	332	99.0	-49.2
All Other Nonbuilding ($000)	143	152	0	-5.9	—
Total Construction ($000)	8,013	4,363	641	83.7	-34.1
LAWTON MSA					
Employment (Number)					
Labor Force[a]	48,900	49,209	50,475	-0.6	-1.6
Total Employment	46,475	46,253	48,400	0.5	-1.1
Unemployment Rate (%)	5.0	6.0	4.1	—	—
Wage & Salary Employment	33,962	33,800	34,000	0.5	-0.3
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	4,862	9,659	630	-49.7	47.5
Number of Units	50	126	7	-60.3	40.0
Residential—Multi Family					
Dollar Value ($000)	0	180	0	—	0.0
Number of Units	0	6	0	—	0.0
Nonresidential					
Commercial ($000)	1,777	3,032	0	-41.4	—
Industrial ($000)	191	830	0	-77.0	0.0
Institutional ($000)	0	1,390	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	1,165	1,997	209	-41.7	-46.3
All Other Nonbuilding ($000)	38	0	0	—	0.0
Total Construction ($000)	8,031	17,088	838	-53.0	2.1
MUSKOGEE MA					
Employment (Number)					
Labor Force[a]	31,775	31,956	31,950	-0.5	0.3
Total Employment	29,425	28,747	30,150	2.4	0.9
Unemployment Rate (%)	7.4	10.0	5.6	—	—
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	2,631	216	329	E	0.0
Number of Units	40	2	5	E	0.0
Residential—Multi Family					
Dollar Value ($000)	51	0	51	—	—
Number of Units	2	0	2	—	—
Nonresidential					
Commercial ($000)	891	400	192	122.8	0.0
Industrial ($000)	0	0	0	0.0	0.0
Institutional ($000)	277	0	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	919	3,160	116	-70.9	—
All Other Nonbuilding ($000)	0	5	0	—	0.0
Total Construction ($000)	4,769	3,780	688	26.2	32.0

Note: Includes revisions.

[a] Civilian Labor Force.

E = exceeds 600 percent.

Sources for all tables: Local utilities companies; 10th Federal Reserve Bank; Federal Home Loan Bank of Topeka; Oklahoma Employment Security Commission; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by Marjorie E. Earley, Statistician for CEMR and Brian M. Hickey, Data Analyst.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. November 1989.

The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73069. November 1989, volume 57, number 11, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma 73070. Subscript'on price per year is $10.00 Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

EQUAL OPPORTUNITY STATEMENT

This institution in compliance with Title VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and other Federal laws and regulations does not discriminate on the basis of race, color, or national origin, sex, age, religion, handicap, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Center for Economic and Management Research
University of Oklahoma
Norman, Oklahoma 73019-0450

OKLAHOMA CITY AND TULSA MSAs

				Percentage Change	
Category	8 Mos. '89	8 Mos. '88	Aug. '89	8 Mos. '89/'88	Aug./July '89
OKLAHOMA CITY MSA					
Employment (Number)					
Labor Force[a]	492,962	498,738	501,000	-1.2	-1.3
Total Employment	468,650	469,350	479,800	-0.1	-0.9
Unemployment Rate (%)	5.0	5.9	4.9	—	—
Wage and Salary Employment	406,000	406,550	403,400	-0.1	0.1
Mortgage Loans Closed ($000,000)[b]	64	72	8	-10.4	59.6
Bank Deposits ($000,000)[c]					
Demand Deposits	801	820	743	-2.4	-3.5
Time and Savings Deposits	1,161	1,133	1,137	2.4	-0.8
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	116,426	78,846	16,386	47.7	9.8
Number of Units	1,346	1,112	190	21.0	4.4
Residential—Multi Family					
Dollar Value ($000)	21,816	1,374	700	E	—
Number of Units	504	75	22	572.0	—
Nonresidential					
Commercial ($000)	31,059	46,193	7,594	-32.8	113.1
Industrial ($000)	3,739	5,285	578	-29.3	-18.2
Institutional ($000)	56,578	12,414	1,285	355.8	-97.4
Nonbuilding					
Streets and Highways ($000)	20,665	61,376	3,536	-66.3	-16.7
All Other Nonbuilding ($000)	1,617	1,674	138	-3.4	-38.1
Total Construction ($000)	251,901	207,163	30,216	21.6	-58.4
General Business Index	94.8	91.9	93.8	3.1	-0.8
TULSA MSA					
Employment (Number)					
Labor Force[a]	343,438	341,762	354,000	0.5	-1.2
Total Employment	322,025	314,886	336,500	2.3	-0.5
Unemployment Rate (%)	6.2	7.9	4.9	—	—
Wage and Salary Employment	299,888	295,138	302,700	1.6	-0.1
Mortgage Loans Closed ($000,000)[b]	122	166	21	-26.3	9.0
Bank Deposits ($000,000)[c]					
Demand Deposits	927	904	873	2.5	-6.0
Time and Savings Deposits	2,076	2,165	1,984	-4.1	-5.0
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	97,211	74,748	12,517	30.1	20.1
Number of Units	1,239	980	163	26.4	13.2
Residential—Multi Family					
Dollar Value ($000)	82	1,298	0	-93.7	0.0
Number of Units	4	56	0	-92.9	0.0
Nonresidential					
Commercial ($000)	18,181	45,294	1,247	-59.9	-1.9
Industrial ($000)	14,061	13,135	1,468	7.1	2.6
Institutional ($000)	11,500	9,212	88	24.8	-89.9
Nonbuilding					
Streets and Highways ($000)	28,972	28,760	3,587	0.7	-39.4
All Other Nonbuilding ($000)	2,710	2,957	496	-8.4	-14.8
Total Construction ($000)	172,717	175,403	19,402	-1.5	-5.4
General Business Index	92.9	88.0	93.8	5.5	-0.8

Note: Includes revisions.

E = Exceeds 600 percent.

[a] Civilian Labor Force.

[b] By Savings and Loan Associations.

[c] Total deposits of large commercial banks (accounted for 35 percent of all commercial bank deposits as of December 31, 1988 for Oklahoma City and 54 percent of all commercial bank deposits as of December 31, 1988 for Tulsa).

CONSTRUCTION, STATE

				Percentage Change	
Category	8 Mos. '89	8 Mos. '88	Aug. '89	8 Mos. '89/'88	Aug./July '89
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	238,114	179,848	30,702	32.4	7.4
Number of Units	2,877	2,430	381	18.4	6.7
Residential—Multi Family					
Dollar Value ($000)	22,329	3,913	831	470.6	—
Number of Units	518	221	26	134.4	—
Nonresidential					
Commercial ($000)	67,363	106,063	10,382	-36.5	54.6
Industrial ($000)	19,399	23,790	2,204	-18.5	-26.2
Institutional ($000)	75,519	26,114	3,865	189.2	-92.3
Nonbuilding					
Streets and Highways ($000)	201,023	213,776	16,495	-6.0	-43.8
All Other Nonbuilding ($000)	4,759	5,044	659	-5.6	-21.9
Total Construction ($000)	628,507	558,547	65,139	12.5	-45.0

Note: Includes revisions.

V8130-1A

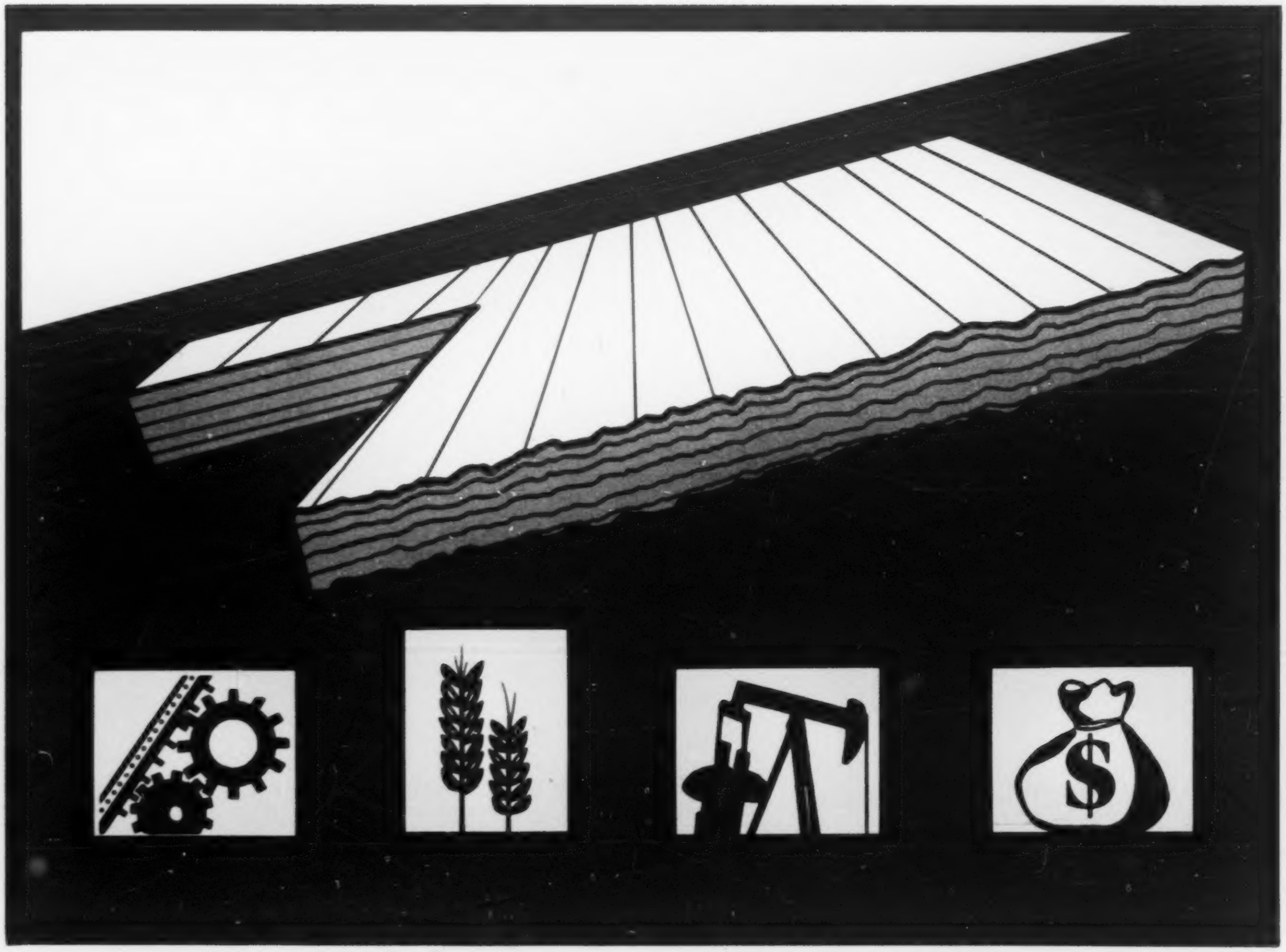
OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF OKLAHOMA

ISSN 0030-1671

December 1989

VOL. 57, ISSUE 12



The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73019-0450. December 1989, volume 57, number 12, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma 73070. Subscription price per year is $10.00. Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

The Editorial Review Board welcomes original manuscripts, studies, and research reports from persons in both the public and private sector in any area of economics and business administration. The editorial policy of the *Bulletin* promotes a free exchange of ideas and analyses. Accordingly, the contents do not necessarily reflect the views of the editor or the publisher.

Manuscripts for consideration should be typed, double-spaced, and submitted in duplicate. Each submitted manuscript is reviewed by at least two members of the Editorial Review Board and a decision is usually reached in four to six weeks.

Address all manuscripts and correspondence to:

Oklahoma Business Bulletin
Center for Economic and Management Research
307 West Brooks, Room 4
Norman, Oklahoma 73019-0450

The *Oklahoma Business Bulletin* is published by the Center for Economic and Management Research, College of Business Administration, The University of Oklahoma.

©1989 by the Center for Economic and Management Research. Printed in the United States of America.

CEM RESEARCH
Center for Economic and Management Research

PUBLICATIONS STAFF

Director	NEIL J. DIKEMAN, JR.
Assistant Director	DAVID PENN
Information Specialist	MARJORIE E. EARLEY
Publication Manager	ALICE WATKINS
Publication Assistant	PATRICIA WICKHAM
Graphics	DANIEL CHU
Copyreader	MARILYN CAIN
Data Analyst	BRIAN HICKEY

EDITORIAL REVIEW BOARD

CLYDE C. COLE President, Tulsa Chamber of Commerce, Tulsa, Oklahoma.

JAMES A. CONSTANTIN David Ross Boyd Professor Emeritus, College of Business Administration, University of Oklahoma, Norman, Oklahoma.

JAMES E. HIBDON Professor of Economics, University of Oklahoma, Norman, Oklahoma.

H.E. RAINBOLT Chairman of the Board, Federal National Bank & Trust Company, Shawnee, Oklahoma.

ROBERT L. SANDMEYER Dean, College of Business Administration, Oklahoma State University, Stillwater, Oklahoma.

WILLIS J. WHEAT T.K. Hendrick Professor of Marketing/Management, School of Management and Business Sciences, Oklahoma City University.

DANIEL A. WREN Professor of Management, University of Oklahoma, Norman, Oklahoma.

Table of Contents

TABLES

Summary of Indicators 2

Selected Economic Indicators 2

Retail Trade in Metro Areas and State 3

Retail Trade in Selected Cities 4

Metropolitan Area Data

  Enid and Lawton 5

  Muskogee 5

  Tulsa 6

  Oklahoma City 7

ARTICLES

Business Highlights 8
David Penn

An Analysis of Oklahoma's Economy 10
Craig Knutson

An Overview of State and Local Government in Oklahoma 20
Larkin Warner

Oklahoma's Widening Personal Income Gap 29
Gerald M. Lage

SUMMARY OF INDICATORS

Category	9 Mos. '89	9 Mos. '88	Sept. '89	Percentage Change 9 Mos. '89/'88	Percentage Change Sept./Aug. '89
Personal Income (Monthly Average)					
Unadjusted ($000,000)	3,795	3,582	3,865	5.9	0.3
Adjusted for CPI ($000,000)	3,078	3,046	3,092	1.0	-0.2
Crude Oil Production (000 bbl)[a]	72,706	80,461	8,801	-9.4	-2.6
Natural Gas Production (000 mcf)[a]	1,394,899	1,410,805	157,147	-1.1	-11.2
Industrial Power Sales (000,000 Kwh)[b]	6,624	6,413	792	3.3	0.5
Total Bank Deposits (Monthly Average) ($000,000)[c]					
Demand	7,405	7,571	7,303	-2.2	0.8
Savings	23,519	24,469	23,371	-3.9	-0.4
Savings and Loan Associations ($000,000)					
Assets	10,629	10,451	10,321	1.7	2.0
Mortgage Loans Closed	377.9	496.9	39.3	-24.0	-18.0
General Business Index	96.3	94.7	97.2	1.7	-0.9

Note: Includes revisions.

[a] Eight months and August data. Natural gas includes casinghead gas.

[b] Sales of larger privately owned utility companies.

[c] Total deposits of all depository institutions.

SELECTED ECONOMIC INDICATORS

Category	9 Mos. '89	9 Mos. '88	Sept. '89	Percentage Change 9 Mos. '89/'88	Percentage Change Sept./Aug. '89
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	262,911	201,315	24,797	30.6	-19.2
Number of Units	3,172	2,698	295	17.6	-22.6
Residential—Multi Family					
Dollar Value ($000)	22,712	5,651	383	301.9	-53.9
Number of Units	528	277	10	90.6	-61.5
Nonresidential					
Commercial ($000)	93,406	119,063	26,044	-21.6	150.9
Industrial ($000)	21,034	25,817	1,635	-18.5	-25.8
Institutional ($000)	82,548	32,087	7,028	157.3	81.8
Nonbuilding					
Streets and Highways ($000)	212,388	234,490	11,364	-9.4	-31.1
All Other Nonbuilding ($000)	5,225	5,357	465	-2.5	-29.3
Total Construction ($000)	700,224	623,781	71,717	12.2	10.1
EMPLOYMENT TRENDS					
Total Labor Force (000)[a]	1,528.0	1,533.4	1,525.3	-0.4	-2.0
Total Employment (000)	1,437.8	1,425.9	1,446.1	0.8	-2.3
Unemployment Rate (%)	5.9	7.0	5.2	—	—
Wage and Salary Employment (000)	1,136.7	1,129.2	1,139.5	0.7	0.7
Manufacturing (000)	163.9	162.1	164.0	1.1	-0.7
Mining (000)	43.8	45.1	43.9	-2.9	-1.1
Government (000)	247.4	246.5	245.2	0.4	5.2
Contract Construction (000)	33.8	34.8	35.2	-2.9	-0.8
Services (000)	251.6	246.9	256.0	1.9	0.2
Retail Trade (000)	217.4	213.4	217.3	1.9	-0.3
Average Weekly Hours (Per Worker)					
Manufacturing	41.3	40.9	41.9	1.0	0.5
Average Weekly Earnings ($ Per Worker)					
Manufacturing	437.93	420.08	447.07	4.2	2.4
Contract Construction	421.81	427.28	412.18	-1.3	-6.9
Retail Trade[b]	192.72	190.67	198.13	1.1	1.0

Note: Includes revisions in some previous months.

[a] Civilian Labor Force.

[b] Excluding eating and drinking places.

RETAIL TRADE IN METRO AREAS AND STATE
($000)

	9 Mos. '89	9 Mos. '88	Sept. '89		Percentage Change		
					9 Mos. '89/'88	Sept./Aug. '89	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	1,472,803	1,377,851	164,071	166,745	6.9	5.3	1.6
Apparel Group	253,004	246,035	31,430	29,448	2.8	-0.3	-0.1
General Merchandise Group	881,510	875,265	101,072	86,938	0.7	4.8	-6.5
Furniture Group	218,599	199,403	24,036	24,471	9.6	0.1	1.2
Lumber Group	138,505	156,500	15,651	16,821	-11.5	2.9	-0.9
Auto Dealers	1,077,956	1,304,377	123,600	126,806	-17.4	10.3	12.6
Gasoline	313,087	292,063	36,128	38,112	7.2	11.5	13.1
All Other	329,142	313,684	41,689	42,445	4.9	1.0	-5.8
Total	4,684,606	4,765,178	537,677	531,786	-1.7	5.7	2.5
TULSA MSA							
Food Group	1,093,486	1,033,777	126,539	124,598	5.8	3.7	-1.7
Apparel Group	173,527	177,920	21,605	20,403	-2.5	2.7	-4.3
General Merchandise Group	678,669	638,346	84,050	74,889	6.3	2.9	-5.0
Furniture Group	161,892	162,116	17,117	16,093	-0.1	-17.0	-12.3
Lumber Group	133,980	126,767	15,326	15,756	5.7	-3.9	-5.6
Auto Dealers	673,886	816,698	78,192	79,610	-17.5	10.5	12.6
Gasoline	192,254	179,244	21,635	23,353	7.3	10.9	13.1
All Other	177,447	179,603	20,848	20,481	-1.2	4.6	-3.2
Total	3,285,141	3,314,471	385,312	375,183	-0.9	3.7	0.2
ENID MSA							
Food Group	81,568	75,679	9,634	9,554	7.8	-0.3	-4.7
Apparel Group	14,848	14,614	1,845	1,709	1.7	3.8	5.5
General Merchandise Group	65,973	64,352	8,727	7,287	2.5	12.1	-0.4
Furniture Group	9,981	10,620	1,099	1,047	-6.0	1.9	1.7
Lumber Group	9,144	8,412	1,179	1,224	8.7	9.8	11.9
Auto Dealers	48,037	58,123	5,454	5,639	-17.4	9.6	12.6
Gasoline	17,950	16,734	2,029	2,186	7.3	10.9	13.1
All Other	16,636	16,535	1,396	1,759	0.6	-18.6	-12.8
Total	264,147	265,069	31,363	30,405	-0.3	4.9	1.2
LAWTON MSA							
Food Group	114,764	118,279	11,816	11,057	-3.0	21.1	3.5
Apparel Group	18,649	18,439	2,293	2,257	1.1	2.9	-1.1
General Merchandise Group	110,593	112,430	13,084	11,079	-1.6	3.3	-9.8
Furniture Group	19,167	20,273	2,194	2,077	-5.5	6.9	3.5
Lumber Group	16,896	17,522	2,039	2,064	-3.6	5.3	-3.6
Auto Dealers	84,994	102,889	9,788	10,013	-17.4	10.4	12.6
Gasoline	27,221	25,411	3,280	3,339	7.1	12.9	13.2
All Other	18,086	19,034	1,154	1,186	-5.0	-26.3	-4.6
Total	410,370	434,277	45,648	43,072	-5.5	8.7	1.4
MUSKOGEE AREA							
Food Group	86,712	82,068	10,229	10,575	5.7	12.6	9.8
Apparel Group	19,317	17,626	2,197	2,131	9.6	-16.8	-15.7
General Merchandise Group	51,225	52,042	6,452	5,676	-1.6	-2.2	-9.2
Furniture Group	8,982	7,908	822	767	13.6	-22.7	-35.6
Lumber Group	9,057	8,561	1,178	1,220	5.8	-6.7	-8.3
Auto Dealers	42,004	50,877	4,784	4,936	-17.4	9.8	12.6
Gasoline	20,013	18,646	2,309	2,437	7.3	11.4	13.1
All Other	14,049	15,345	1,322	1,597	-8.4	20.0	10.6
Total	251,359	253,073	29,293	29,339	-0.7	4.0	1.5
STATE[a]							
Durable Goods	3,874,641	4,455,265	438,453	442,001	-13.0	1.8	0.3
Auto Dealers	2,522,388	3,053,225	289,589	296,854	-17.4	10.2	12.6
Accessory Dealers	285,830	276,428	32,834	31,958	3.4	-0.5	-10.7
Total Automotive	2,808,218	3,329,653	322,423	328,812	-15.7	9.0	9.8
Furniture	337,905	298,860	34,683	34,328	13.1	-38.2	-40.8
Household Appliances	197,760	217,628	22,232	22,139	-9.1	2.5	0.2
Total Furniture and Appliances	535,665	516,488	56,915	56,467	3.7	-26.9	-29.5
Lumber and Building Materials	421,295	430,259	49,174	51,515	-2.1	-2.0	-7.1
Hardware Stores	52,189	50,117	5,969	5,633	4.1	-1.5	-5.5
Total Lumber, Building Materials & Hardware	473,484	480,376	55,143	57,148	-1.4	-1.9	-7.0
Nondurable Goods	8,519,190	8,143,817	981,951	944,473	4.6	6.3	-2.5
Apparel	637,189	634,328	75,087	70,854	0.5	-3.7	-7.3
Drug Stores	329,012	313,696	36,563	34,584	4.9	-0.9	-2.9
Eating and Drinking Places	1,274,252	1,203,799	145,252	143,458	5.9	3.9	-2.2
Food Group	2,773,717	2,662,952	311,628	305,714	4.2	11.8	-1.3
Gasoline	918,913	857,052	105,107	111,708	7.2	11.2	13.1
General Merchandise Group	2,054,187	1,913,156	245,489	214,701	7.4	4.4	-8.0
Total Retail Trade	12,393,831	12,599,082	1,420,404	1,386,474	-1.6	4.9	-1.6

[a] Total includes data for categories not shown in the table.

RETAIL TRADE IN SELECTED CITIES
($000)

					Percentage Change		
	9 Mos. '89	9 Mos. '88	Sept. '89		9 Mos. '89/'88	Sept./Aug. '89	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
Ada	109,241	110,317	12,566	12,242	-1.0	3.0	-2.1
Altus	107,951	113,291	13,383	12,859	-4.7	15.5	10.2
Alva	31,753	33,957	3,639	3,569	-6.5	9.1	2.5
Anadarko	35,511	37,049	3,876	3,746	-4.2	8.3	-2.4
Ardmore	158,020	164,217	19,102	18,060	-3.8	14.6	4.6
Bartlesville	214,640	215,321	24,985	23,601	-0.3	2.2	-4.6
Blackwell	25,937	27,540	3,110	3,034	-5.8	12.6	8.4
Broken Arrow	227,136	231,167	27,061	26,160	-1.7	7.5	5.1
Chickasha	88,072	93,784	9,923	9,808	-6.1	1.5	0.2
Clinton	57,091	61,158	6,822	6,626	-6.6	16.0	11.7
Cushing	40,381	43,488	4,617	4,549	-7.1	4.4	4.5
Del City	80,525	84,729	9,119	8,978	-5.0	-0.5	-4.7
Duncan	141,883	159,017	16,681	15,774	-10.8	7.6	1.2
Durant	79,545	84,299	9,669	9,497	-5.6	31.1	21.8
Edmond	209,585	207,188	23,427	23,174	1.2	8.1	0.2
Elk City	67,751	70,160	8,424	8,063	-3.4	17.3	8.3
El Reno	77,269	78,608	8,775	8,646	-1.7	5.3	2.7
Guthrie	50,976	54,256	5,869	5,687	-6.0	11.9	1.3
Guymon	45,709	45,497	5,889	5,765	0.5	18.1	11.4
Henryetta	31,813	33,644	3,483	3,341	-5.4	11.1	0.1
Hobart	22,226	23,499	2,842	2,727	-5.4	20.9	14.6
Holdenville	20,011	21,787	2,346	2,306	-8.2	8.9	5.3
Hugo	33,749	35,557	4,355	4,114	-5.1	21.0	16.4
Idabel	46,812	47,952	5,693	5,426	-2.4	13.3	2.1
Lawton	381,584	407,407	42,481	39,847	-6.3	8.7	0.6
McAlester	110,221	116,428	13,339	12,844	-5.3	14.0	8.9
Miami	91,971	96,333	10,559	10,348	-4.5	2.2	2.7
Midwest City	399,314	416,810	47,245	44,341	-4.2	4.9	-0.3
Moore	138,555	153,308	16,481	15,874	-9.6	7.4	3.5
Muskogee	234,159	237,261	26,622	26,509	-1.3	3.9	1.3
Norman	442,126	463,199	49,892	50,684	-4.5	5.8	2.2
Oklahoma City	2,367,590	2,459,517	274,371	269,203	-3.7	5.8	4.0
Okmulgee	48,116	50,707	5,658	5,576	-5.1	8.4	5.1
Pauls Valley	45,113	47,916	4,701	4,467	-5.8	-3.6	-12.2
Pawhuska	16,413	16,832	1,873	1,859	-2.5	14.8	5.4
Ponca City	156,063	152,534	18,771	18,678	2.3	9.4	8.1
Poteau	53,089	56,482	6,078	5,950	-6.0	0.8	0.3
Sand Springs	82,657	82,158	9,695	9,224	0.6	4.8	-0.4
Sapulpa	81,577	84,032	9,072	9,027	-2.9	7.9	4.6
Seminole	41,261	44,332	4,624	4,449	-6.9	6.1	-0.7
Shawnee	200,583	195,907	21,939	21,584	2.4	1.3	-0.9
Stillwater	162,156	164,699	17,534	17,834	-1.5	-0.9	-12.5
Tahlequah	69,731	70,632	8,031	7,946	-1.3	3.8	-0.9
Tulsa	2,393,045	2,436,503	279,640	273,867	-1.8	2.7	0.2
Watonga	13,021	13,016	1,441	1,471	0.0	10.8	5.9
Weatherford	62,240	62,966	7,649	7,541	-1.2	9.9	5.1
Wewoka	12,250	13,330	1,400	1,422	-8.1	6.8	9.2
Woodward	97,262	101,548	11,463	10,932	-4.2	9.6	1.9
Total Selected Cities	9,703,684	10,021,339	1,126,215	1,099,229	-3.2	5.7	1.9

Sources for all tables: Local utilities companies; 10th Federal Reserve District Member Banks; Federal Home Loan Bank of Topeka; Oklahoma Employment Security Commission; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, *Progressive Report of the Transportation Director;* Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by Marjorie E. Earley, Statistician for CEMR and Brian Hickey, Research Assistant.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. December 1989.

The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73019. December 1989, volume 57, number 12. Second class postage paid at Norman, Oklahoma 73070. Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

EQUAL OPPORTUNITY STATEMENT

This institution in compliance with Title VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and other Federal laws and regulations does not discriminate on the basis of race, color, or national origin, sex, age, religion, handicap, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

ENID AND LAWTON MSAs

Category	9 Mos. '89	9 Mos. '88	Sept. '89	Percentage Change 9 Mos. '89/'88	Percentage Change Sept./Aug. '89
ENID MSA					
Employment (Number)					
Labor Force[a]	28,208	28,917	27,825	-2.5	-4.0
Total Employment	25,728	27,194	26,650	-5.4	-4.3
Unemployment Rate (%)	4.8	5.9	4.2	—	—
Wage and Salary Employment	21,200	21,544	21,200	-0.5	-1.6
Wholesale and Retail Trade	6,000	6,300	6,000	-4.8	0.0
Manufacturing	1,522	1,567	1,500	-2.9	-6.2
Industrial Power Sales (000 Kwh)	342,772	348,015	37,424	-1.5	-7.8
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	778	570	140	36.5	—
Number of Units	7	6	1	16.7	—
Residential—Multi Family					
Dollar Value ($000)	300	0	0	—	0.0
Number of Units	6	0	0	—	0.0
Nonresidential					
Commercial ($000)	1,428	804	12	77.5	-91.8
Industrial ($000)	159	0	0	—	—
Institutional ($000)	0	300	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	5,358	2,692	0	99.0	—
All Other Nonbuilding ($000)	322	152	180	111.8	—
Total Construction ($000)	8,345	4,519	332	84.7	-48.2
LAWTON MSA					
Employment (Number)					
Labor Force[a]	48,897	49,125	48,875	-0.5	-3.2
Total Employment	46,492	46,194	46,625	0.6	-3.7
Unemployment Rate (%)	4.9	6.0	4.6	—	—
Wage and Salary Employment	33,978	33,733	34,100	0.7	0.3
Industrial Power Sales (000 Kwh)	154,863	149,580	20,100	3.5	9.0
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	4,976	10,435	115	-52.3	-81.7
Number of Units	51	135	1	-62.2	-85.7
Residential—Multi Family					
Dollar Value ($000)	0	180	0	—	0.0
Number of Units	0	6	0	—	0.0
Nonresidential					
Commercial ($000)	1,777	3,522	0	-49.6	0.0
Industrial ($000)	191	830	0	-77.0	0.0
Institutional ($000)	0	1,390	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	3,292	7,962	1,227	-70.0	487.5
All Other Nonbuilding ($000)	38	0	0	—	0.0
Total Construction ($000)	9,373	24,318	1,342	-61.5	60.1

Note: Includes revisions. [a]Civilian Labor Force.

MUSKOGEE MA

Category	9 Mos. '89	9 Mos. '88	Sept. '89	Percentage Change 9 Mos. '89/'88	Percentage Change Sept./Aug. '89
Employment (Number)					
Labor Force[a]	31,686	32,047	30,975	-1.1	-3.1
Total Employment	29,394	28,856	29,150	1.9	-3.3
Unemployment Rate (%)	7.3	10.0	5.9	—	—
Industrial Power Sales (000 Kwh)	129,281	130,316	17,137	-0.8	30.9
Port of Muskogee					
Tons in	93,405	68,344	14,343	36.7	-19.5
Tons out	49,870	19,612	13,022	154.3	76.0
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	2,960	216	329	E	0.0
Number of Units	45	2	2	E	0.0
Residential—Multi Family					
Dollar Value ($000)	102	0	51	—	0.0
Number of Units	4	0	2	—	0.0
Nonresidential					
Commercial ($000)	1,083	400	192	170.8	0.0
Industrial ($000)	0	0	0	0.0	0.0
Institutional ($000)	277	0	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	1,098	3,160	178	-65.3	53.4
All Other Nonbuilding ($000)	0	4	0	—	0.0
Total Construction ($000)	5,519	3,780	750	46.0	9.1

Note: Includes revisions. [a]Civilian Labor Force. E = Exceeds 600 percent.

TULSA MSA

Category	9 Mos. '89	9 Mos. '88	Sept. '89	Percentage Change 9 Mos. '89/'88	Percentage Change Sept./Aug. '89
Employment (Number)					
Labor Force[a]	346,000	341,800	346,000	1.2	-2.2
Total Employment	322,622	315,322	327,400	2.3	-2.7
Unemployment Rate (%)	6.2	7.8	5.4	—	—
Wage and Salary Employment	300,422	295,656	304,700	1.6	0.7
Manufacturing	49,567	49,300	50,100	0.5	0.8
Mining	14,489	14,244	14,600	1.7	-0.7
Government	36,800	36,778	36,900	0.1	1.6
Wholesale and Retail Trade	70,711	70,556	71,000	0.2	-0.3
Average Weekly Earnings					
Manufacturing ($ Per Worker)	444.88	445.42	460.57	-0.1	2.7
Industrial Power Sales (000 Kwh)	1,791,662	1,684,270	220,202	6.4	-1.2
Mortgage Loans Closed ($000,000)[b]	122	166	21	-26.3	9.0
Bank Deposits ($000,000)[c]					
Demand Deposits	922	903	886	2.1	1.5
Time and Savings Deposits	2,060	2,169	1,938	-5.0	-2.3
Air Transportation					
Passengers Enplaning (Number)	1,071,917	1,022,801	111,428	4.8	-20.7
Passengers Deplaning (Number)	1,097,013	1,030,362	114,811	6.5	-22.9
Freight (Tons)	20,020	16,457	2,321	21.6	-11.6
Water Transportation					
Tulsa Port of Catoosa					
Tons In	490,349	356,646	52,099	37.5	-24.8
Tons Out	866,988	835,967	80,078	3.7	-41.3
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	108,370	83,474	11,114	29.8	-11.2
Number of Units	1,374	1,095	134	25.5	-17.8
Residential—Multi Family					
Dollar Value ($000)	234	1,374	152	-83.0	—
Number of Units	8	75	4	-89.3	—
Nonresidential					
Commercial ($000)	18,973	57,432	648	-67.0	-48.0
Industrial ($000)	15,631	5,297	1,570	195.1	6.9
Institutional ($000)	12,998	16,004	1,498	-18.8	E
Nonbuilding					
Streets and Highways ($000)	33,790	62,312	4,818	-45.8	34.3
All Other Nonbuilding ($000)	2,997	1,835	252	63.3	-51.6
Total Construction	192,992	231,854	20,051	-16.8	3.2
General Business Index	93.0	88.3	94.0	5.4	0.2

Note: Includes revisions.

[a] Civilian Labor Force.

[b] By Savings and Loan Associations, 8 months and August data.

[c] Deposits of large commercial banks (accounted for 50 percent of all commercial bank deposits as of December 31, 1988).

E = Exceeds 600 percent.

OKLAHOMA CITY MSA

Category	9 Mos. '89	9 Mos. '88	Sept. '89	Percentage Change 9 Mos. '89/'88	 Sept./Aug. '89
Employment (Number)					
Labor Force[a]	492,656	498,900	490,200	-1.3	-2.2
Total Employment	468,544	469,833	467,700	-0.3	-2.5
Unemployment Rate (%)	5.0	5.8	4.6	—	—
Wage and Salary Employment	406,200	407,211	408,300	-0.2	1.2
Manufacturing	49,400	48,533	49,400	1.8	-0.6
Mining	10,267	11,944	10,300	-14.0	0.0
Government	97,300	95,278	98,300	2.1	4.1
Wholesale and Retail Trade	101,056	100,556	101,100	0.5	-0.1
Average Weekly Earnings					
Manufacturing ($ Per Worker)	490.68	467.83	493.02	4.9	0.9
Industrial Power Sales (000 Kwh)	945,590	914,881	114,659	3.4	-1.9
Mortgage Loans Closed ($000,000)[b]	64	72	8	-10.4	59.6
Bank Deposits ($000,000)[c]					
Demand Deposits	798	821	776	-2.8	4.5
Time and Savings Deposits	1,156	1,136	1,120	1.8	-1.5
Air Transportation					
Passengers Enplaning (Number)	1,162,825	1,119,094	123,175	4.0	-17.1
Passengers Deplaning (Number)	1,176,862	1,130,387	122,146	4.1	-20.5
Freight Enplaned (Tons)	5,456	5,935	541	-8.1	-20.8
Freight Deplaned (Tons)	7,424	8,244	1,022	-10.1	11.3
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	128,004	87,599	11,578	46.1	-29.4
Number of Units	1,479	1,222	133	21.0	-3.0
Residential—Multi Family					
Dollar Value ($000)	21,816	1,374	0	E	—
Number of Units	504	75	0	572.0	—
Nonresidential					
Commercial ($000)	56,016	57,432	24,958	-2.5	228.6
Industrial ($000)	3,738	5,297	0	-29.4	—
Institutional ($000)	60,559	16,004	3,980	278.4	209.8
Nonbuilding					
Streets and Highways ($000)	23,005	62,311	2,339	-63.0	-33.8
All Other Nonbuilding ($000)	1,643	1,835	26	-10.5	E
Total Construction ($000)	294,782	231,854	42,881	27.1	41.9
General Business Index	94.7	92.2	94.1	2.7	0.4

Note: Includes revisions.

[a] Civilian Labor Force.

[b] By Savings and Loan Associations, 8 months and August data.

[c] Deposits of large commercial banks (accounted for 35 percent of all commercial bank deposits as of December 31, 1988).

E = Exceeds 600 percent.

Retail Trade Revisions

One of the most important business indicators compiled and published by the Center for Economic and Management Research (CEMR) is its monthly estimate of retail sales. These data provide not only trends in retail activity by type of merchandise sold but also seasonal patterns and trends for selected areas and towns.

Periodically, as new census data benchmarks are developed, estimates of state and local retail sales must be revised to reflect changes in census definitions since the previous survey. The *Census of Retail Trade, Oklahoma, 1982* has been used since July 1985 as the basis for estimating monthly retail sales in Oklahoma. However, CEMR has recently updated its estimates so that they are based on the *Census of Retail Trade, Oklahoma, 1987* which was published earlier this year and contains the most current information available.

The monthly percent changes remain the same, however, the magnitude of the 1987 base will differ, especially in the state's smaller towns.

The Center will be pleased to provide monthly revisions for 1987 to the present time for those who maintain their own data banks.

Business Highlights

DAVID PENN

THE STATE'S ECONOMY limped along through the third quarter of 1989, showing only slight gains in economic activity. Job growth compared with one year ago was virtually nil and consumers stayed away from purchases of autos and other durable goods.

As measured by wage and salary employment, net job growth was virtually nil in the third quarter compared with the same period of 1989. A very modest 1,700 gain in the number of private sector jobs was substantially offset by a decline of 1,200 jobs in the government sector.

The third quarter performance of wage and salary employment further lowered the already low rate of employment growth experienced this year. During the first nine months of 1989, wage and salary employment rose just 0.7 percent compared with 1988. Although manufacturing and services employment continued to rise, the rate of increase was smaller than that of 1988. The expansionary effect of gains in these two sectors were dampened by very low growth in the very large government sector.

But a slowdown in job growth does not necessarily suggest the beginning of a new economic slump. Rather, the low rates of employment growth experienced in the State during the first nine months of the 1989 helps to place the year 1988 in perspective. The rapid gains achieved in 1988 followed several years of job decline and erosion of the State's economic base. One could argue the 1988 job gains were proportionally large because the economy had been in such a slump, suggesting that further job increases will occur more slowly in the future.

Additional, but mixed, evidence of slower growth in the State's economy may be found in retail sales for the first nine months of 1989. Total retail trade fell by 1.7 percent mainly due to the falling value of auto sales which declined by 17.4 percent. In the third quarter, total retail sales were down by 4.0 percent compared with the third quarter of 1988.

The large percentage decline was not due so much to sluggish sales in 1989 as to very large auto sales in 1988 which were not duplicated in 1989. Auto dealers were coming off a very big year in 1988; even a good year in 1989 would probably be smaller than 1988.

Removing auto sales from retail sales numbers shows the underlying strength in consumer purchases in Oklahoma. For example, the table shows the percent change in retail sales in Oklahoma for major metropolitan areas and the State from the third quarter 1988 to third quarter 1989. The effect of auto sales on total retail sales is dramatic: most areas show large declines when auto sales are included but significant increases when auto sales are excluded.

Retail Sales, State and Selected Cities Percent Change 1988: III-1989: III

Area	With Autos	Without Autos
State	-5.3%	4.3%
Oklahoma City MSA	-5.5	3.6
Tulsa MSA	-2.0	7.2
Lawton MSA	-9.1	-2.6
Enid MSA	-1.8	6.1
Muskogee MA	-0.7	7.1

Note: Calculations based on seasonally adjusted data.

Retail sales still show significant volatility even after removing auto sales due to the instability of durable goods purchases. Spending for durable goods tends to occur in spurts; during downturns in the economy, consumers will put off spending on big-ticket items such as refrigerators and furniture, causing sales of durable goods to plummet. As shown in the graph, this clearly occurred in Oklahoma during 1986 and 1987. Durables rapidly recovered during the upturn in 1988 as households replaced worn-out or obsolete durable goods. In contrast, spending for non-durables such as gasoline and food was much less volatile during the same period. Non-durables have shown relative stability since late 1988.

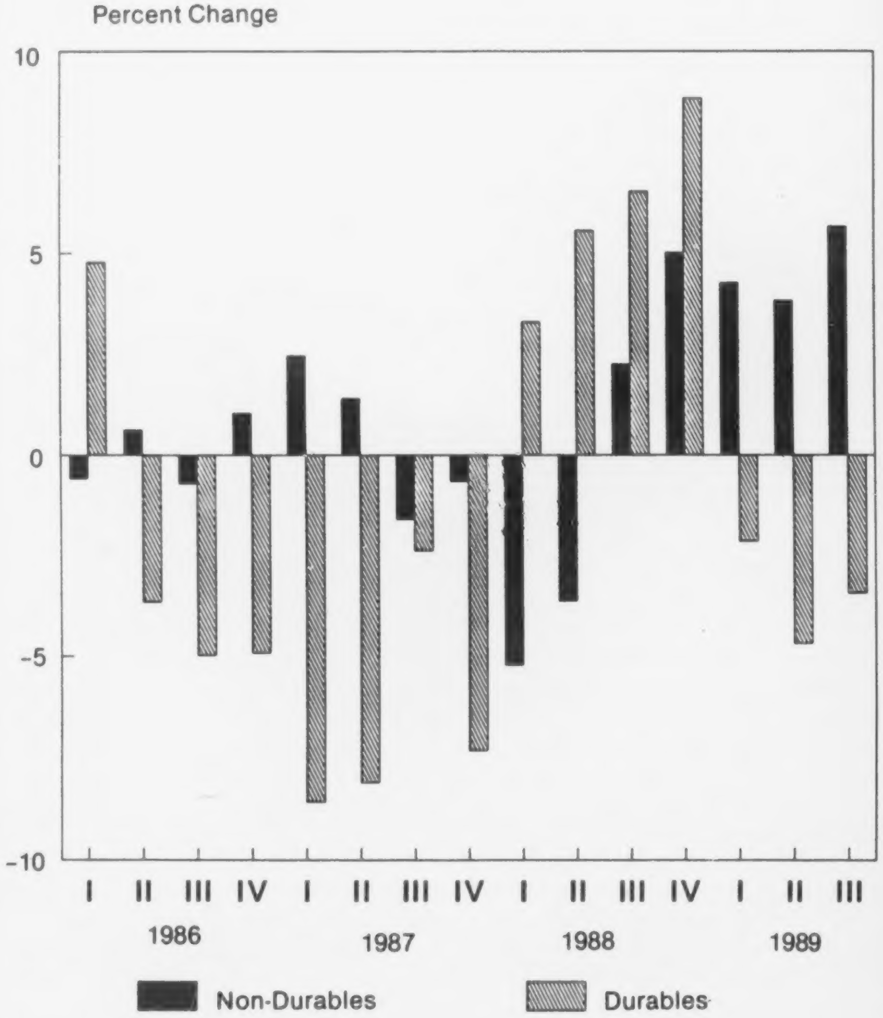
An additional explanation for slow job growth in Oklahoma is the performance of the national economy during 1989. Several indicators suggest a slowing of the rate of growth of the national economy:

- Inflation-adjusted consumer expenditures grew at a slower rate during the first three quarters of 1989, rising by average of 3.2 percent compared with 4.0 percent for 1988.
- The combined effect of higher interest costs and increased compensation of employees caused corporate profits to fall during the first half of the year.
- The capacity utilization rate of industry levelled off following two years of increases.
- As measured by rates on three-month Treasury bills, interest rates fell somewhat during the third quarter but still are higher than last year.

The severity and length of the period of slower national economic activity will depend to a great extent on the monetary policy exercised by the Federal Reserve Board. Monetary policy seemed to ease in the third quarter as suggested by higher growth rates for the money supply and a decline of interest rates. At the same time, however, the announced goal of the Fed's chairman of zero inflation may cause a reversal of the recent easing, generating higher pressure on interest rates and slowing the national economy further.

David Penn is Assistant Director for the Center for Economic and Management Research.

Growth of Quarterly Retail Sales from Previous Year, Excluding Autos



Data: Center for Economic and Management Research.

An Analysis of Oklahoma's Economy

CRAIG KNUTSON

THE FOLLOWING IS AN analysis of the economy for Oklahoma and its two largest metros during the 2nd quarter 1989. The analysis will cover seven subsectors of the economy, with the subsector carrying the greatest amount of weight first, followed by the remaining subsectors in decreasing importance to the GBI. A look at the 3rd quarter 1989 is offered based upon preliminary data and professional intuition.

Energy

The Energy Subsector declined 2.5 percent from the 2nd quarter of 1988 and was off 2.1 percent from the 2nd quarter of 1987. This quarter's decline represents the 4th consecutive quarterly decline for this subsector (when compared to the same quarter previous year). Again, every indicator posted a decline from the previous year. Only the gross production (GP) tax collections are showing any strength, and that is due to the volume of oil and gas being sold, not the price for which it's being sold. In current dollar terms, GP tax collections actually rose from the 2nd quarter of last year (4.6 percent). Unfortunately, with inflation running at a 5.2 percent clip in the 2nd quarter, that gain was wiped out. Once again, natural gas tax collections led the way, hitting almost 61 percent of the total in the 2nd quarter of this year, up from 59.4 percent in the 2nd quarter of 1988.

As mentioned in last quarter's report, the energy sector shows little promise of picking up for the remainder of the year, especially if one looks at the two leading energy indicators within the index: intent-to-drill permits (ITD) and seismic crew activity. Both indicators posted sizeable declines in the 2nd quarter (down 46.4 percent and 34.8 percent, respectively), signifying *at least* another six months of negative production news from the energy patch. With active rotary rigs off almost 13 percent from last year, decreased production levels are a real possibility for the remainder of the year. Production levels for oil through the first six months of the year are off almost 10 percent. With active rotary rigs hitting a decade low monthly average of 91 in June, one can't expect any improvement for that month. The energy patch and the state's general fund are suffering from that age old problem of poor market prices. GP tax collections will improve with higher prices, which, in turn, will most likely result in increased production, which, in turn, . . .

The reason for the weak production levels in Oklahoma are directly related to the stronger than "quotaed" levels within OPEC. At the start of the 2nd quarter, OPEC production was estimated to be just under their quota of 19.5 million barrels per day (mb/d). As the summer months drew closer (and demand for gasoline grew stronger), the price of North Sea Brent and West Texas Intermediate surged near the $23.00 mark. This naturally, sent OPEC production quotas out the window. By the end of the quarter, OPEC production levels exceeded the 21 mb/d level and crude oil prices began to fall. Despite heavy demands for refined crude oil products (primarily gasoline), overall worldwide demand was not quite as strong as expected because of the recent weakness in the manufacturing sector of the national economy. With factory capacity utilization rates and durable goods orders declining, demands from the energy-intensive manufacturing sector had slowed. That trend has carried into the 3rd quarter as well, signifying a promising 3rd quarter for the consumer, but, again, not for the producer; especially the Oklahoma producer.

More of the same is expected in the 3rd quarter. Demand for OPEC oil has been estimated to be 20.9 mb/d for the second half of the year; OPEC oil production is forecasted to come in above that level. With oil stocks already high and demand likely to slow, downward pressure on prices, therefore production, can be expected. If that scenario plays out at the international level, expect Oklahoma to suffer along too. Rig counts for July and August hover in the 105-115 range, hardly a number that conjures up thoughts of increased exploration or production for the rest of this year and into 1990. The only positive findings so far are buried in the ITD permits. They show that, despite weakness, the percentage that "new wells" make of the total is rising each month. But, a higher percentage of a declining number is still a small number. Oh well, I tried!

The natural gas industry suffered through a poor pricing environment in the 2nd quarter, with the average price rate of natural gas sold in the state sitting around $1.40. The 3rd quarter brought good news to the industry: President Bush signed the natural gas decontrol legislation for which all of the producing states had pushed so hard. Unfortunately, as we approach the end of the 3rd quarter, the good news from decontrol has not spread to the spot and contracted prices for the fuel. Spot prices for August delivery of natural gas were flat, and declines were expected for both September and October, barring any unusually cold weather. If that occurs, expect to see an increase in the number of well "shut-ins" for the 3rd quarter. That, of course, does not bode well for either gas exploration or the tax collections off the sale of natural gas. Despite the activity by ARCO and several other majors in the Arbuckle area (southeast Oklahoma), the short-term forecast for natural gas remains weak.

The long-term forecast is another story. According to Donald Dufresne, a natural gas analyst for Merrill Lynch, "the outlook for both consumption and pricing in the 1990s is excellent." Most energy people would be happy with one or the other, so both sound great. Merrill Lynch, a firm that works with billions of dollars of investors' capital, is seeing fewer and fewer investors scared away from the purported "gas bubble" that has hung on so persistently. But stronger demand, the shrinkage of excess capacity, and firmer prices are leading investment firms like Merrill Lynch to recommend natural gas to its customer base . . . as a long-term investment.

While consumption of natural gas has risen 11 percent over the past two years, the deliverability of that commodity has, according to Merrill Lynch, actually declined 8 percent. Furthermore, President Bush's clean-air legislation is likely to result in an even stronger push away from coal-fired to gas-driven electrical plants in the U.S. during the decade of the 1990s. Finally, as we have witnessed very dramatically in our state, co-generation is no longer a concept, but a reality within the business community. With one plant constructed, another under construction, and several others being negotiated, gas-powered electricity in the 1990s is a given. With natural gas as this state's "energy leader" already, look for continued growth in natural gas investment, drilling, and tax collections for years to come. Most of the take-or-pay contracts of the early 1980s have been worked out and minimal damage has resulted from the Canadians' entry into the domestic market. As Richard Bogert, President of Bogert Oil Co., recently stated: "For companies holding large reserves of natural gas, companies that understand the dynamics of finding and producing this resource, one fact is clearly evident: the upside pricing potential means the stage is set for potentially dynamic revenues." Strong words from the head of a once dominant oil company!

Manufacturing

The Manufacturing Subsector posted a scant 0.4 percent gain from last year, the weakest year-over-year quarterly gain since the 3rd quarter of 1987. Like factory trends at the national level, growth in the manufacturing sector has stalled. Overall manufacturing employment in Oklahoma and its two metropolitan areas has slowed considerably from last year's level, eeking out 1.2 percent to 1.7 percent growth rates. The Tulsa MSA, already dominant among metro areas in manufacturing, should continue to grow given recent announcements, more than offsetting weaknesses found statewide. As has been reported in the space in the past, Oklahoma City has never been, either numerically or as a percentage of total Wage & Salary Employment, a "manufacturing center." Tulsa, on the other hand, has been the dominant manufacturing metro, although historically it has been a "pump, pipe, valve, and rig" manufacturing center, highly dependent upon the energy industry. In addition to weaknesses on the employment side, weekly hours worked in manufacturing have begun to rise again, signifying that local manufacturers are reluctant to hire. Paying for overtime is, for the short-term, more cost-effective than carrying additional full-time employment, especially with the U.S. dollar on the rise.

The Department of Commerce's report on New & Expanded Manufacturers and Processors in the state indicates that manufacturing activity has and will (most likely) slow. Through the 1st six months of 1989, the announced number of firms, the amount of investment ($), and the total number of jobs have fallen below 1988 levels. It is important to note that the 1st six months of 1988 was one of the strongest periods of the decade. But what this data really tells us is what, if completed, is likely to happen 6 to 24 months down the line. With 82 firms, expected to employ 5,100 new employees, and representing almost $315 million in new investment, the future is not bleak. But with the American Airlines expansion in Tulsa representing about 30 percent of the expected new job growth, many areas of the state will not benefit from these announcements. While the oil industry in this state and in Tulsa, in particular, is far from dead, the recent expansions in Tulsa in the area of aviation suggest that Tulsa might be considered the "aviation," not "oil," capital of the world. If the announcements are realized, the futuristic concept of an "aviation triangle" (Wichita-Tulsa-Oklahoma City) may become reality.

The slowdown locally is not surprising, considering trends at the national level. The trade weighted value of the dollar escalated sharply in the 2nd quarter, continuing a pattern started in the 4th quarter of 1988. Industrial production went flat in the 2nd quarter and, after years of continuous growth, capacity utilization continued to fall. The latter was, in a way, positive in that the decline reduced fears of renewed inflation. We must remind ourselves constantly that the goal of the Fed is to keep inflation under control (0-2 percent ideally).

But the prospects for a strong 2nd half in the area of manufacturing revolves around movements in the dollar and capital spending. Currently, the dollar is gaining strength and capital spending isn't growing where it is needed if we are to continue the three year growth in manufacturing employment and output. A stronger dollar makes U.S.-made products less competitive and the high interest rate environment over the past 18 months has discouraged many from investing as heavily in new plant and equipment. While interest rates have come down slightly, the investment expenditures in manufacturing sector is expected to increase a paltry 3.6 percent (real terms) this year, well below the 12.8 percent growth seen last year. Not surprising, factory, durable, and machine tool orders all declined in July, following several months of weakness.

As has been mentioned consistently in this space, continued investment in new technology is absolutely critical to maintaining, regaining, and securing international market share. The high dollar of the early 1980s devastated many of our country's basic and manufacturing industries. But, for those that have survived, costs have been reduced, break even points have been lowered, and, as a whole, many are among the most efficient and lowest-cost producers in the world. While keeping costs, in particular labor costs, under control is important, quality is the key. In fact, quality has replaced productivity as the key component in international manufacturing plants. In reality, they are inseparable and both require investment, either in physical terms (equipment, software, etc.) or human terms (educable, trainable workforce). We in Oklahoma are well aware that the future of our manufacturing base is tied directly to the quality of our educational system (from pre-school to vo-tech). While lower interest rates and a weak dollar will help, the Germans and Japanese have shown that quality, not the value of their mark or yen, is what sells the products they produce. Mitsubishi television sets and Mercedes Benz automobiles are not inexpensive, but they are quality-built and consistently high sellers.

Construction

The Construction Subsector of the Oklahoma economy fell 4.2 percent from the 2nd quarter of 1988, despite statewide improvements in residential and nonbuilding activity this past quarter. Residential activity (new permit) was up in the state (28.9 percent) and in both metros (41.4 percent and 27.1 percent, Oklahoma City and Tulsa) from 2nd quarter 1988. Again, percentage changes can be misleading, especially when working from such a small base. With very little new residential construction occurring over the past three years, one month within a quarter can distort the comparisons up or down. When one looks at the level of new residential activity today versus just four years ago (1985), the percentage changes turn dramatically negative, ranging from a –28.3 percent in Tulsa to a –51.1 percent in Oklahoma City. And for those of you who are unfamiliar with the real estate market in Oklahoma, 1985 wasn't even our peak year for new residential construction . . . 1983 was! EVERYTHING IS RELATIVE.

Year-to-date home sales (volume) are also up in both metros; unfortunately, the average sales price of the homes sold is moving in the opposite direction. While supply as measured by the Multilist is declining, Supply/Demand Imbalance within the residential market will continue as long as new permit activity exceeds the demand for new and used units. With new residential permit activity up in both July and August in the Oklahoma City metro, look for prices to remain depressed.

As mentioned before, the nonbuilding portion of the Construction Subsector posted an almost 50 percent increase over last year's level, thanks primarily to interstate and state roadway improvements and a sales tax issue project to improve local infrastructure. With the sale of over $550 million in turnpike bonds, Governor Bellmon is publicly pronouncing a 10,000-11,000 construction employment increase over the next 2+ years, which means new nonbuilding construction contracts will continue to escalate. Unfortunately, the nonresidential side of the construction ledger remains in "deep yogurt." Office vacancy rates still are high, ranging from 27-30 percent, depending upon the surveyor and criteria. The office market, while depressed statewide, seems to be faring a little better in Tulsa than in Oklahoma City. The reported net absorption numbers are higher in Tulsa and there has been a recent clamoring for new "Class A" office space. While both metros could probably use more, the fundamental health of Tulsa's economy (both current and projected) supports those desires much better.

While there are still some hot spots nationwide, most areas are much weaker in terms of new residential construction and home sales. The decline in interest rates (especially mortgage) since May helped push home sales up in June and July. But mortgage rates, which hit a two year low in July, began a slight ascent again in August, throwing cold water on any talk of a revival. In fact, the National Association of Realtors have forecasted a slight decline in sales nationwide this year. As the sales weaken and rates remain stubbornly high, it comes as no surprise that housing construction data for the

2nd quarter was off as well — 8 percent according to F.W. Dodge Group. Their data showed that the declines were not a result of weakness in the "oil patch" or "real estate ravaged" Southwest, but in "recent hot beds" of construction activity. Of the top ten most active metropolitan areas in the country (dwelling units started), seven posted declines from the 2nd quarter of 1988. The top four areas (Riverside-San Bernadino, Washington D.C., Los Angeles-Long Beach, and Atlanta) had declines ranging from 6-34 percent. Because of those declines, the 2nd quarter construction rate was the lowest in more than six years. I guess "what goes around, comes around!"

The prospects for new residential and nonresidential construction for the state remain bleak. The market is working. Despite a recent rise in new building permit activity, new apartment and office construction (the two weakest markets) are virtually nonexistent. We can only hope that trend continues. I maintain that the only prudent construction policy within the state of Oklahoma in the residential and nonresidential markets is one of "purchase and refurbish." Real demand (new business and household growth) is still too weak to support new construction, even if the units/space are preleased or presold. Internal "churn" does very little for the overall economy, although real estate brokers will benefit. Net absorption is most likely to take place when the existing infrastructure is well maintained and upgraded. The metros need to be focusing their efforts on office-intensive industries (such as financial, consulting, and professional services) to reduce vacancy rates. Being the most affordable residential or nonresidential market is attractive, but to whom? A $56,000 house and $14/ft Class A office space is a great selling tool, but only if the potential purchaser has a job. We have enough foreclosed property already!

Consumer Demand

The Consumer Demand Subsector, subject to the 5+ percent national inflation rate, posted a scant 2.1 percent decline in the 2nd quarter. While sales tax collections are moving in a positive direction statewide, both metros suffered through 6 percent quarterly declines in overall retail trade from the 2nd quarter 1988. While the Apparel group remains somewhat weak, general merchandise tax collections are growing, even in constant dollar terms. The biggest surprise with the 2nd quarter numbers was that, despite the number of large, one-time events taking place in the Oklahoma City metropolitan area, sales tax collections rose only modestly (2.1 percent). The sales tax collection figures for the state and both metros in July were up, thanks in part to the $50 million + Olympic Festival held in late July. Given the success of the National Conference of State Legislatures, sales tax collections in at least Tulsa should likewise be positive in the 3rd quarter. The first indication of that showed up in the "back-to-school" sales for Tulsa, where TeleCheck Southwest reported a 12.9 percent increase in retail activity for Tulsa. The Oklahoma City metro, where employment trends have been weak over the past 4-5 months, posted a 7.2 percent decline.

The brightest news (editorial comment) concerning the consumer side of the economy was the long-awaited news that we, in Oklahoma, aren't in fact subject to the inflationary trends witnessed nationwide. The Center for Economic and Management Research, through the Oklahoma Department of Commerce, released a report that essentially said what most close to the subject felt all along: it is less expensive to live and work in Oklahoma. The cost of living index for the state, based on a U.S. average of 100 and a starting point of 1982, shows that we rose to a level of 105.5 in 1982 and currently stand at 94.2, almost 6 percent below the national average. The index covers seven separate communities in Oklahoma. For businesses that only remembered the inflated "oil boom" days of the early 1980s, this study demonstrates both the dramatic declines in cost of living and the cost competitive position each resident/citizen enjoys relative to his/her regional and national counterparts. Now when we say "it costs less to live in Oklahoma," we can prove it. The economic development potential of this study is strong and the results of this research confirm that the inflation-adjusted sales data used in the GBI should be adjusted upwards. In essence, the dollar does go further in Oklahoma.

With the national CPI running at a 5 percent clip through the seven months of 1989, fears of "stagflation" returning to the market anytime soon have been abating. In fact, nearly every "forecasting expert" has reduced their projections for inflation for both 1989 and 1990. The hypothesis (by Dr. Milton Friedman) presented last quarter may be valid. The change in the quantity of money remains weak, with no signs of renewed growth, therefore, the rate of inflation should follow suit. Only time will tell, but based upon consumer, producer, and wholesale price index movements, inflation should continue to weaken. The primary items to watch are 3rd and 4th quarter energy prices (especially since we're importing over 50 percent of our petroleum products) and food prices. With OPEC still overproducing and major agricultural commodity prices falling, the 2nd half of this year should be a good one for the consumer. Based upon retail and auto sales in July and August, both nationally and in Oklahoma, such sentiment appears accurate.

The July and August consumer confidence surveys (Conference Board) remain strong, indicating that the consumer still intends to spend. At the same time, the consumer is saving, at almost double the rate he did just two years ago. The baby boomers, representing half the adult population, are causing the transformation. As Edward Yardeni, Prudential Bache economist, recently wrote: "the yuppies are borrowers and the couch potatoes are savers." The baby boomers are turning into couch potatoes and, because of their propensity to save, Dr. Yardeni expects to see a 10 percent savings rate by 1993. Renewed savings plus expected rapid productivity gains will result in sub-5 percent inflation rates over the same period. Keeping inflation checked means greater purchasing power potential. Greater purchasing power means stronger consumer spending. In all, "the level of consumer confidence is substantially above that which generally signals a potential recession."

Agriculture

The Agricultural Subsector of the GBI remains the strongest element, expanding 3.8 percent over last year's levels. While weaker than it has been for some time, overall agricultural markets remain healthy. As was the case in the 1st quarter, wheat prices were up (28 percent) and beef prices were down (-2.8 percent). Fortunately, the strength of Oklahoma's wheat industry offset the slight declines in beef prices, allowing for the 3.8 percent growth for the quarter.

Wheat prices continue to be strong, although they, too, are beginning to plateau. Prices, which began the year at $3.97/bushel, rose to $4.11/bushel and averaged out at $3.82 for July. While down from earlier this year, the current price is still 41 cents higher than last July's level. Because of record rains in June, the wheat harvest was late, but yielded higher prices. Unfortunately, the USDA estimated that growers in Oklahoma (the nation's #2 winter wheat state) harvested 5.7 million acres this year, with an average yield per acre of 27 bushels. That is well below last year's level of 36, but combined with the higher prices, helped offset the declines in row crops due to the drought.

What a difference a few months make. The two year drought is over for Oklahoma farmers and ranchers. With almost a third of the calendar year left, we have already exceeded average annual rainfall amounts! Almost 15 percent of the next year's crop has been planted, soil moisture conditions are excellent, and the government is recommending a 5 percent base acreage increase to all wheat farmers. Poorer 1988 production, coupled with the heavily subsidized government wheat export program, brought inventories down considerably. So, the good news is that soil and weather conditions are excellent for planting and the prospects are equally bright for next year's crop yield. In fact, a recent forecast by a veteran agricultural economist (John Schnittker) points to a 1990 wheat harvest that could reach a six-year high of 2.5 billion bushels. The Agricultural Department forecasts a 2.1 billion bushel crop, up 14 percent from 1988. Either way, wheat production is going to rise. The bad news is that prices will, if everything goes smoothly on the production side, decline from their already weakening levels. Even if wheat prices do decline, forecasts of both yield and prices for row crops are strong, more than offsetting any weakness that might occur in the wheat sector. Overall, Mother Nature has demonstrated her cyclical behavior, this time her good side!

After posting consecutively quarterly price declines (inflation-adjusted), beef prices are poised to take off again. My most recent quarterly reports have mentioned the historically low herd size in this country, bringing existing and potential supply down considerably. The midyear cattle reported an estimated 108.6 million head (cattle and calves), virtually unchanged from last year. However, with the heavy amounts of rain, pasture conditions are excellent. The number of beef heifers, held out of the feeder cattle market for herd building, is up. Prospects, therefore, are good that herd size should start to rebound, but not so much as to push prices down significantly. Barring any strong negative reaction on the part of the consumer over high beef prices, the beef industry should finish the year on a positive note. In fact, the Agricultural Department is forecasting a 2-3 percent increase in the output of red meat and poultry for 1990. With the continued expansion of meat exports, the increase in output should not negatively impact the overall price increase forecasts for beef. Overall, we should see the Agricultural Subsector continue its positive impact on the GBI for at least the next two quarters.

General

The General Subsector posted another quarterly gain from last year, up a seasonally-adjusted 2 percent from the 2nd quarter of 1988. Perhaps a truer indication of how far this Subsector has come, however, is the fact that it has risen 14.4 percent above 2nd quarter 1987 levels, the largest two year jump of any of the Subsectors. Of the six variables used in this Subsector, four of them moved positively. Those were: Wage & Salary Employment (+0.8 percent), Total Personal Income (+1.2 percent), the Unemployment Rate (down to 5.7 percent from 6.7 percent), and Services Employment (+1.2 percent). Of the two decliners—Bankruptcies and the Bank Stock Index (BSI)—only one was off significantly: the BSI (-20.8 percent). Bankruptcies posted a rare increase of 0.6 percent, hopefully just a quarterly aberration. Overall, this Subsector is finally providing some much needed strength to an index that continues to struggle along the bottom. The news of employment and income growth is significant, for additional income should help boost retail activity this fall and winter.

The 2nd quarter started with interest rates, the U.S. dollar, and stocks still climbing, while bonds were in a slump. Despite the news that the GNP expanded at a 5.5 percent clip, the April survey of the "50 top economists" from the Blue Chip Economic Indicators showed over 50 percent of the panel expected a recession by late 1989-early 1990. But then economists have forecasted nine of the last two recessions, so . . ! The quarter ended with bonds moving strongly upward, while interest rates, the dollar, and stocks either flat or declining. But there was one constant: a prominent economic forecaster (John Mueller) wrote an article for the *Wall Street Journal* entitled "Recession's Coming — Will We Learn." His contention, based on the decline in the World Dollar Base, is that "the U.S. economy will enter a recession within six months." The date of the article was June 29, 1989.

By the end of July, the 1st quarter GNP was revised downward to 3.7 percent, the 2nd quarter GNP was estimated to be 1.7 percent (the weakest in three years), and it appeared that the "recession-forecasting economists" were going to be right! Fortunately, it can probably be demonstrated (intuitively if not statistically) that forecasts from economists are best described as an "inverse indicator" — whatever they say will happen almost certainly won't! As we end September, the 2nd quarter GNP is now estimated at 2.5 percent! While the national economy is still struggling, the international economy continues to plug along at a greater rate than ours. With a "nonsynchronous expansion" going on internationally (i.e. Japan and West Germany growing at double digit rates while other economies like ours soften), we continue to find markets for our products while our appetite for imports continues to weaken. The trade deficit, when viewed from a moving average perspective, continues to show a downward trend, and both the national and global stock markets continue to move upward.

Perhaps the least known leading economic indicator — the conclusions from the Business Cycle Dating Committee — does not suggests a recession at all. The Committee, made up of seven business cycle experts, sets the historical record on whether the economy is in a recession. They have no plans to meet and, in fact, haven't met in over 6 years. As one of the Committee members recently remarked: "Not every hiccup in the economy is a recession. A downturn would have to be widespread and sharp before the Committee met." The key indicators they watch: GNP, industrial production, and employment. As we close the end of the 3rd quarter, GNP was revised upward to 2.5 percent, industrial production rose for the second consecutive month in August (+2.8 percent), and Wage & Salary Employment expanded another 110,000 jobs, a number that would have been doubled if not for the 108,000 workers removed from payroll counts because of strikes.

The economy continues to climb doggedly upward and as one economic analyst recently wrote, "the economy is in a phase of disinflationary growth." That combination (rising growth and declining inflation) normally occurs during periods of economic recoveries. This "economic forecaster" will stick with his forecast made last year at this time — no recession through 1990. The sensitive economic indicators all point to a strengthening economy. A "soft landing followed by a slow takeoff" is as concise a description of where the national economy has been and is headed. While a "boom" is nowhere in sight, slow growth is better than no growth. We in Oklahoma, ever more dependent upon the national and international economies, must hope for and contribute to a continued strengthening of the national economy. With inflation abating and employment, savings rates, personal income, and capital spending rising, the risk of a recession is quite remote. Our biggest concern now is whether economists will now forecast strong growth. If that occurs, get liquid!

Financial

Hopefully, to no one's surprise, this Subsector posted another quarterly decline, off a whopping 10.1 percent from last year's levels. I closed last quarter's Financial Subsector analysis with the statement "look for the banking industry to lead the way," addressing which of the two (thrifts or banks) would reach positive net worth first. This quarter's indicators reflect that trend, with S&L loan closings, commitments, and net deposits all falling from last year's levels. Total net income of Oklahoma's two largest publicly-traded banks, however, rose an inflation-adjusted 27 percent from last year and over 111 percent from two years ago. Obviously, the declines within the thrift set of indicators more than offset the positive movement of the banking indicator.

Nationally, the 2nd quarter was one of uncertainty for the thrift industry. There were some givens. The industry was in trouble, in fact, deep trouble. The uncertainty came from not knowing how deep and how it was going to be rectified. The 3rd quarter delivered that news. Based upon 1st quarter data, over 13 percent of the nation's 2,959 S&Ls were insolvent (liabilities exceeding their assets). Another 13 percent had net worths of less than 3 percent of their assets. The biggest surprise was that Oklahoma was not even ranked in the top ten in terms of S&L insolvencies! Oklahoma did, however, rank 39th in terms of earnings (-$31.5 million) and sixth in terms of repossessed assets ($588.2 million).

On August 9, 1989, President Bush signed the "S&L Bailout" bill (formally called the Financial Institution Reform, Recovery, and Enforcement Act of 1989!) into law, authorizing $50 billion over the next 2+ years to remove the sickest S&Ls from the system. While the total cost is now estimated to run over $160 billion, most analysts close to the system feel certain that the eventual cost will be 2-3 times that amount. Despite the costs, the legislation should be very positive for healthy thrifts, according to Alex Sheshunoff, thrift consultant. "It brings stability and respectability back to the industry, it improves earnings because rational competitors will be paying rational deposit rates and, most importantly, it will end up maximizing shareholder value as a result of healthy banks buying healthy thrifts." Sounds impressive; let's hope reality matches theory!

The 2nd quarter results for total net income among the 38 thrifts still operating in this state explained the performance of the thrift indicators in this Subsector. Combined net income in the 2nd quarter was -$89.7 million, almost triple the 1st quarter loss! Sixteen of the 38 institutions posted negative net incomes, with two of them combining for a net income loss of $80.4 million alone. As a state, the net worth-to-asset ratio stands at 2.9 percent, not healthy but better than last year's level. In fact, in the 2nd quarter of last year, combined Oklahoma thrifts had a net worth of -$269.7

million on almost the same amount of assets ($10.3 billion). We're constantly reminded of the bad within the industry, primarily because of a few institutions, but remember that over 60 percent of the institutions posted positive net income for the quarter (up from 45 percent last quarter and 24 percent from last year) and 84 percent posted positive net worth (up 63 percent from last year).

The banking industry continues to show improvement, despite the August failure of our 100th bank since the failure of Penn Square in July 1982. Fortunately, the bank failure in Yale was only the 8th this year and the size of that bank (in terms of assets), like most of the recent failures, was small. State banks, which now total less than 450, posted a net income of $5.14 million in 1988, and made more money in the 1st quarter of 1989 ($24.7 million) than they did in each of the last four years. The 2nd quarter numbers were even more positive, with state banks having a combined net income of $28 million. Through the first six months, Oklahoma bank profits are almost five times the 1988 six month level. Bank profits for Oklahoma County-and Tulsa County-based institutions continue to grow, with Oklahoma County's largest commercial banks posting their third consecutive quarterly improvement through June 30, 1989. While the overall profit picture is positive, it is so at the expense of the declining assets, deposits, and loans. Like the thrift industry, all is improving yet not well, comparatively. speaking. Look for a greater percentage of banks and thrifts to make it into the "positive net income" column, but also look for the number of institutions and the total amount of assets held by those institutions to fall. Much has been written down or off; much more is on the way.

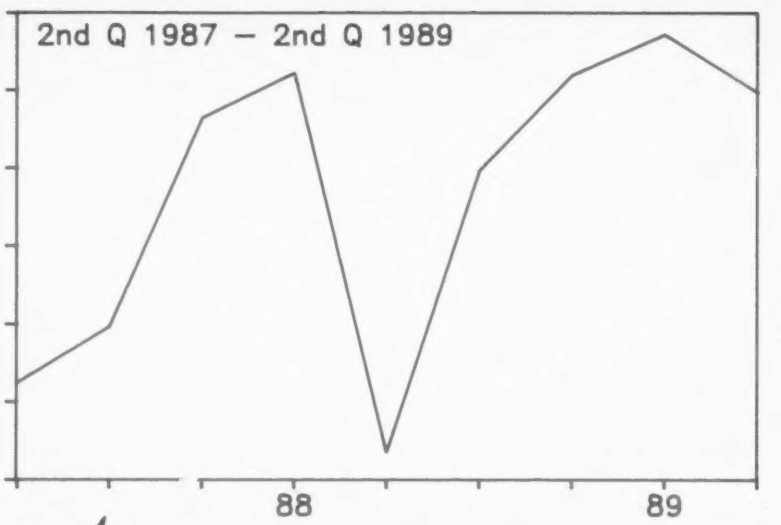
Conclusion

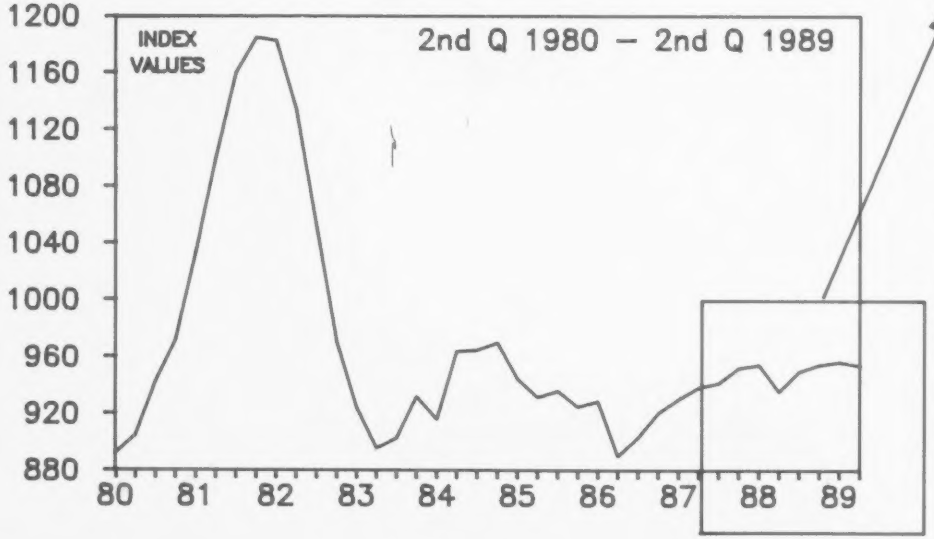
The economy has weakened in the first half of the year. The graphs on the following page reflect that weakness, especially in the Oklahoma City metro area (Figure 1). Total Wage & Salary Employment has begun to slow statewide and has actually turned downward in Oklahoma City. Tulsa, on the other hand, has "taken off," due in large part to the continued strength of the aviation sector. The employment slowdown is disheartening, but not that unexpected if one accepts the premise that Oklahoma is moving more cyclically with the national economy. As demonstrated in Figure 2, the GNP's rate of growth has been slowing since 1987 and the forecast, even from the Administration, is for continued slow growth. In fact, 2nd quarter GNP grew at a 2.5 percent clip, down from the preliminary 2.7 percent rate and below 1st quarter's level of 3.7 percent. The "soft-landing" techniques employed by the Fed have apparently been successful, squelching any projections for an immediate recession. In fact, the National Association of Business Economists recently released their forecast that the U.S. expansion will last at least until the 3rd quarter of 1991, which would set a new record for economic growth.

Unfortunately, with slower growth at the national level, even slower growth can be expected locally. With our economic base still in the "diversifying phase" of development, we should have no hope for growth in excess of the nation's, and preliminary 3rd quarter employment data seems to support that contention. We seem to be "trolling along the bottom," with no evidence of a identifiable reescalation in sight. Perspective is most important in a sluggish economy, so let us remember that "slow growth is better than no growth."

Craig Knutson is Staff Economist for Southwestern Bell Telephone Company.

OKLAHOMA GENERAL BUSINESS INDEX





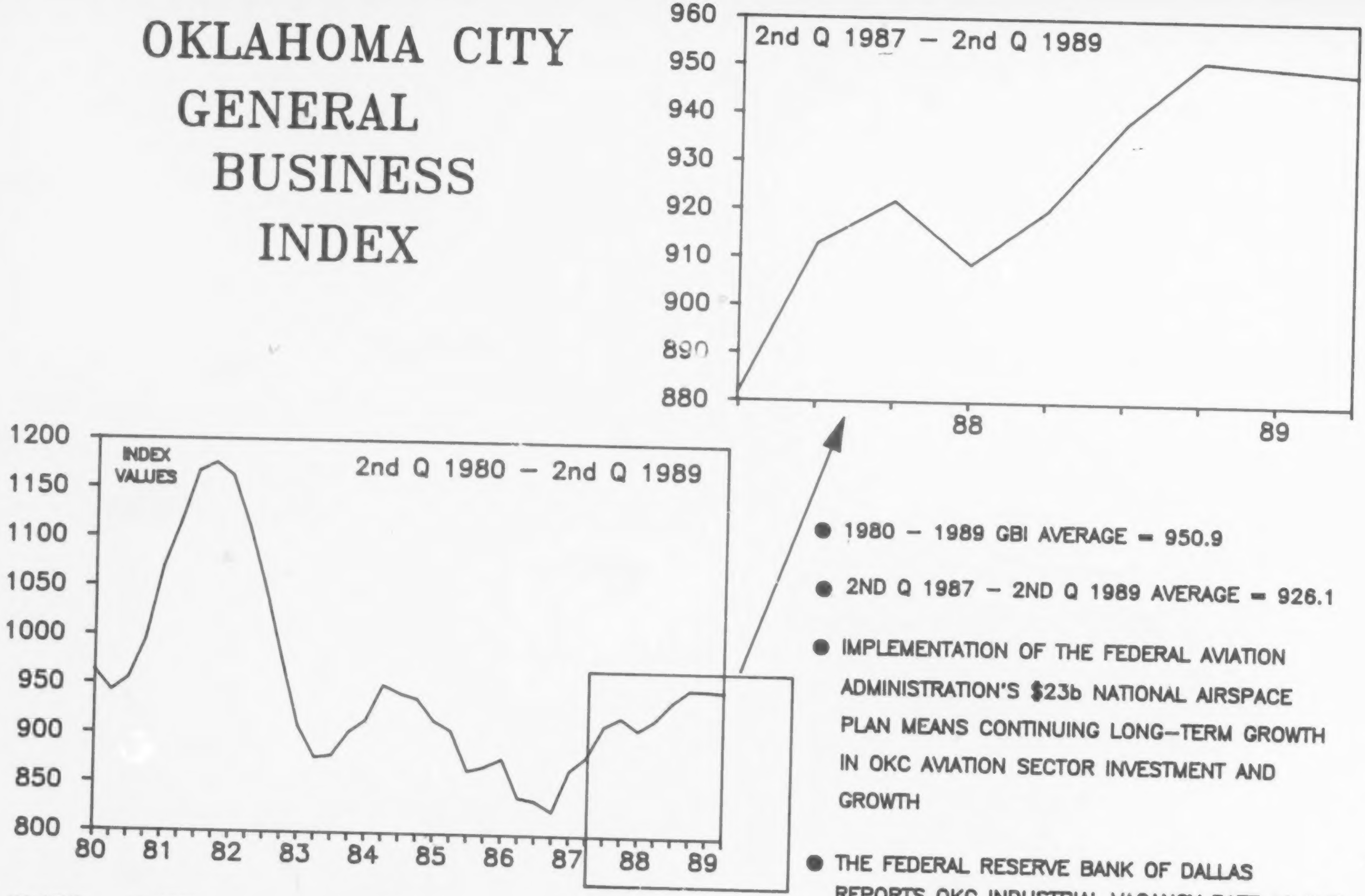
- 1980 – 1989 GBI AVERAGE = 969.7
- 2ND Q 1987 – 2ND Q 1989 AVERAGE = 948.8
- PER CAPITA INCOME IN OKLAHOMA ROSE BY 5.7% IN 1988, JUST UNDER THE NATION'S 6.6% GROWTH
- THE FIVE STATE-OWNED VACATION RESORTS REPORTED AN OVERALL OPERATING PROFIT FOR 1988, A FIRST

2Q 1989 AVERAGE VALUE	1Q 1989 AVERAGE VALUE	% CHANGE[1]	2Q 1988 AVERAGE VALUE	% CHANGE[1]	2Q 1987 AVERAGE VALUE	% CHANGE[1]
953.9	956.9	-0.3	935.4	2	939	1.6

[1] COMPARED TO CURRENT QUARTER

SOURCE: SWBT ECONOMIC DEVELOPMENT DISTRICT/CEMR

OKLAHOMA CITY GENERAL BUSINESS INDEX



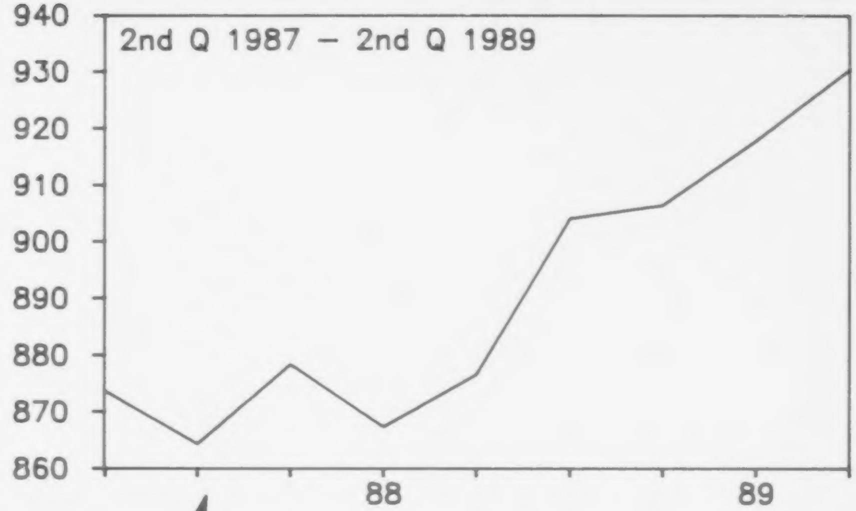
- 1980 – 1989 GBI AVERAGE = 950.9
- 2ND Q 1987 – 2ND Q 1989 AVERAGE = 926.1
- IMPLEMENTATION OF THE FEDERAL AVIATION ADMINISTRATION'S $23b NATIONAL AIRSPACE PLAN MEANS CONTINUING LONG–TERM GROWTH IN OKC AVIATION SECTOR INVESTMENT AND GROWTH
- THE FEDERAL RESERVE BANK OF DALLAS REPORTS OKC INDUSTRIAL VACANCY RATE AS THE LOWEST AMONG MAJOR METROPOLITAN AREAS IN THE SOUTHWEST AT 6%, THE NATIONAL AVERAGE

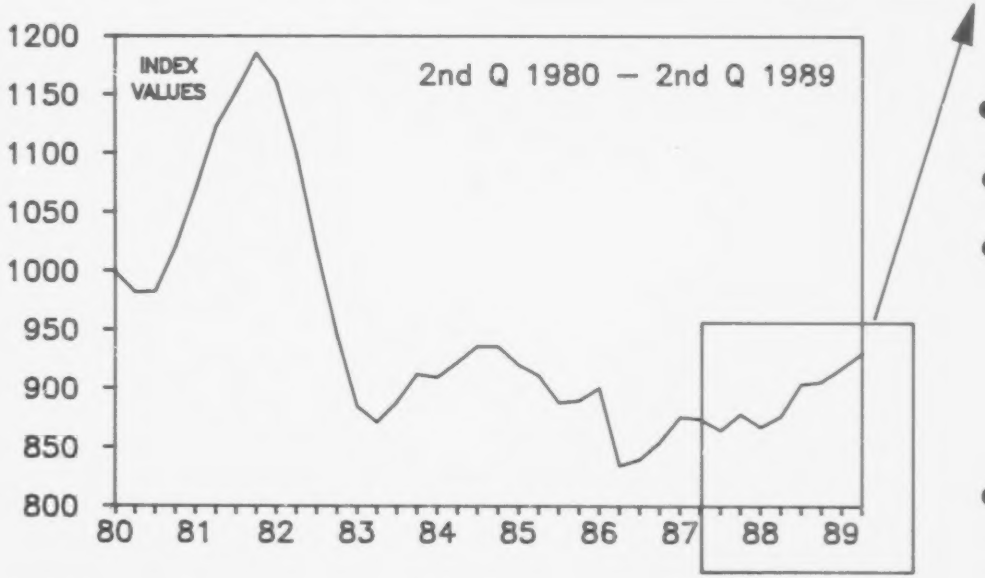
2Q 1989 AVERAGE VALUE	1Q 1989 AVERAGE VALUE	% CHANGE[1]	2Q 1988 AVERAGE VALUE	% CHANGE[1]	2Q 1987 AVERAGE VALUE	% CHANGE[1]
949.1	950.2	–.1	920.2	3.1	881	7.7

[1] COMPARED TO CURRENT QUARTER

SOURCE: SWBT ECONOMIC DEVELOPMENT DISTRICT/CEMR

TULSA GENERAL BUSINESS INDEX





2Q 1989 AVERAGE VALUE	1Q 1989 AVERAGE VALUE	% CHANGE[1]	2Q 1988 AVERAGE VALUE	% CHANGE[1]	2Q 1987 AVERAGE VALUE	% CHANGE[1]
930.5	917.9	1.4	876.7	6.1	873	6.6

[1] COMPARED TO CURRENT QUARTER

- 1980 – 1989 GBI AVERAGE = 945.6
- 2ND Q 1987 – 2ND Q 1989 AVERAGE = 891.1
- SURVEYS OF VISITORS AT THE CONVENTION OF STATE LEGISLATORS IN TULSA SHOW THEM OVERWHELMINGLY IMPRESSED WITH THE CITY –– SPREADING THE NEWS TO THE ENTIRE NATION AS THEY RETURN HOME
- EVEN WITH MAJOR RECENT CITY INVESTMENT IN STREET IMPROVEMENTS, TULSA'S PER CAPITA DEBT IS LESS THAN 40% OF THE NATIONAL MEDIAN, LEAVING ROOM FOR FUTURE INFRASTRUCTURE ENHANCEMENT

SOURCE: SWBT ECONOMIC DEVELOPMENT DISTRICT/CEMR

An Overview of State and Local Government Finance in Oklahoma

LARKIN WARNER

THE SERVICES PROVIDED AND regulations implemented by state and local governments in Oklahoma have a tremendous impact on economic activity. At an even more basic level, the state-local government sector accounts directly for a significant share of Oklahoma's overall employment and flows of spending. By the conclusion of the fiscal year ending June 30, 1990, (FY 90) the general expenditures of state and local government in Oklahoma will be around $8 billion. In June, 1989, Oklahoma's state-local government sector employed 197,000 full-and part-time workers—17.2 percent of total nonfarm payroll employment.

The purpose of this overview of state and local government finance is to introduce some of the fundamentals of the structure and conduct of this important sector. The discussion is divided into three parts. First, the pattern of activity is summarized using expenditures and employment of government units directly providing services to the public. Second, revenues are analyzed with emphasis on the roles of taxes and intergovernmental shifts of funds. Third, the discussion focuses on state government alone and reviews the role of expenditures and appropriations to indicate changes in priorities and finance issues likely to be the source of special pressures in the future.

Direct Governmental Activity

Oklahoma's system of state and local governments consisted of the following separate units in 1987:

State	1
County	77
Municipal	591
School district	636
Special district	498

In addition, there are at least 37 Indian tribal governments in Oklahoma with unique sovereign powers including the power to tax. Detailed federal statistical reports on governmental finances and employment do not include information on tribal governments.

FY87 is the latest year for which detailed data are available in a consolidated form for all units of government. During that year, direct general expenditures for all state-local governments in Oklahoma was $7.2 billion (Table 1). This represents expenditures made directly by the unit of government purchasing an input or otherwise making payments directly to the public; excluded are intergovernmental payments where one unit of government transfers funds to another. Also excluded are expenditures by utilities and insurance trusts (such as unemployment benefits and retirement).

State government is the dominant source of direct general expenditures—accounting for 45 percent of all state-local outlays. (As will be seen in the following section, state government also transfers a great deal of its funds to units of local governments.) Local school districts account for about one quarter of spending, with cities responsible for 20 percent and counties for about 7 percent. Although there are a great many separate special district governments, as a group they generate less than 2 percent of spending.

Table 1 shows the relative importance of direct general spending on various governmental functions. It describes the essential functional responsibility carried on by each type of government. Highlights of these functional responsibilities include the following:

- Half of all direct general spending by state government is for higher education (23.5 percent) and public welfare (25.8 percent).
- Counties specialize in the provision of road systems (27.5 percent) and

TABLE 1

General Expenditures in Oklahoma Fiscal 1987

Expenditures/Type	Total	State	County	Municipal	School District	Special District
Total Expenditures (millions of dollars)	$7,249	$3,258	$547	$1,421	$1,906	$117
Percent by Type:						
Elementary and secondary education	26.3%	0.9%	0.4%	—	9.84%	—
Higher education	10.6	23.5	—	—	—	—
Other education	1.0	2.3	—	—	—	—
Public welfare	11.7	25.8	0.9	0.1	—	—
Health and hospitals	9.4	10.1	18.8	17.6	—	—
Highways and streets	9.1	12.1	27.5	8.0	—	—
Police and fire	4.5	1.1	5.5	18.1	—	—
Corrections	2.0	4.1	1.6	0.2	—	—
Natural resources, parks & recreation	3.2	3.6	2.6	7.0	—	1.7%
Housing & community development	1.9	0.2	0.1	2.0	—	86.3
Sewerage & sanitation	3.6	—	—	18.4	—	—
Governmental administration	5.0	5.0	17.0	7.7	—	—
Interest on general debt	6.2	5.8	17.0	8.9	1.6	12.0
Other	5.5	5.5	8.6	12.0	—	—
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: U.S. Bureau of the Census, *Government Finances in 1986-87.* Series GF-87-5. Washington, D.C.: U.S. Government Printing Office, 1988, p. 83.

health (18.8 percent—largely county health departments); counties spend a larger share on governmental administration (17.0 percent) than is the case with other types of government.

- Municipalities emphasize health and hospitals (17.6 percent), police and fire protection (18.1 percent) and sewerage and sanitation (18.4 percent).
- Local school districts are, of course, a single-function type of government.
- The bulk of the funds spent by special districts is related to housing and community development; other functions currently performed by these districts include fire protection and natural resource management and conservation.

Is Oklahoma's overall functional pattern significantly different from that of other states throughout the nation? Has Oklahoma's pattern of functional allocation changed in any big ways in recent years? A tentative answer to both questions is "No." Table 2 shows the statistically available patterns of outlays of functions for all state-local governments for Oklahoma and the United States in FY77 and 87. Although there is some variation in shares, Oklahoma's state-local government sector did about the same things with about the same relative emphases as it did a decade earlier, and remained quite similar in this respect to the average state. Throughout the nation there is lots of variation in the relative importance of state versus local governments in performing functions. There is also great variation in the relative importance of various tax and other revenue sources. However, overall relative expenditures are similar because the state-local sector has essentially a uniform set of responsibilities within the nation's system of federalism.

State and local government services are often labor-intensive. This is especially true of educational services. Table 3 reports the allocation of full-time equivalent (FTE) employment for major types of government and includes a breakout of educational employment. In October, 1987, the total FTE employment of state and local government in Oklahoma was 171,000. Half of this employment was in education. In the midst of an overall weakening statewide employment picture in Oklahoma, 1982-88, the state-local government sector exhibited expansion. The Oklahoma Employment Security Commission reports 84,000 fewer nonfarm payroll jobs between 1982 and 1988, while state-local government employment grew 9,000.

The Role of Taxes, Other Revenues and Intergovernmental Fiscal Relations in Oklahoma

Taxes are the most politically prominent source of governmental revenue.

Raising the rate or expanding the legal base of a tax always generates public controversy. However, taxes are only one form of governmental revenue, and informed discussion of tax policy in Oklahoma should start with an appreciation of the following fiscal features:

- Attention must be paid to other revenue sources as well as tax revenues.
- Tax policy must be viewed in the context federal, state, and local government fiscal relations.
- Intergovernmental revenues are an especially important source of government finance.

In FY87 (the latest year for which complete data are available), taxes accounted for only 53.8 percent of all general revenue received by state and local government in Oklahoma (Table 4). General revenue refers to all revenue except utility revenue and money flowing into insurance trust programs such as retirement and unemployment insurance. Table 4 treats all state and local government as a single unit; thus intergovernmental payments between state and local government units net out to zero.

TABLE 2

General Expenditures in Oklahoma and the U.S.
Fiscal 1977 and 1987

	Oklahoma		U.S. State and Local Governments	
Expenditures/Type	1977	1987	1977	1987
Total Expenditures (millions of dollars)	$2,937	$7,249	$273,002	$653,608
Percent by Type:				
Elementary and secondary education	25.0%	26.3%	26.1%	24.0%
Higher education	12.8	10.6	9.6	9.2
Other education	2.1	1.0	1.9	1.5
Public welfare	12.3	11.7	12.7	12.3
Hospitals and health	8.3	9.4	8.3	8.7
Highways	10.6	9.1	8.5	8.0
Police and fire	4.4	4.5	5.4	5.4
Sewerage and sanitation	3.2	3.6	3.2	3.3
Interest on general debt	3.3	6.2	4.2	6.4
Other	18.0	17.6	20.1	21.2
Total	100.0	100.0	100.0	100.0

Source: U.S. Bureau of the Census. *Governmental Finances in 1976-77*, Series GF 77 No 5; *Government Finances in 1986-87*, Series GF-87-5. Washington, D.C.: U.S. Government Printing Office, 1978, and 1988.

TABLE 3

Employment in State and Local Government
in Oklahoma
1977, 1982 and 1986

	Number of Employees During October			Percent of Employees		
Type of Employment	1977	1982	1986	1977	1982	1986
Total full-time equivalent employment	140,041	168,398	173,248	100.0%	100.0%	100.0%
Education:	68,630	83,240	88,954	49.0	49.4	51.3
State higher education, instructional	6,250	6,799	7,109	4.5	4.0	4.1
State higher education, other	11,624	13,682	17,332	8.3	8.1	10.0
School district, instructional	36,211	42,257	44,593	25.8	25.1	25.7
School district, other	14,545	20,502	19,920	10.4	12.2	11.5
State government, non-higher education	31,748	41,857	39,993	22.7	24.9	23.1
County	13,893	13,661	13,452	9.9	8.1	7.8
Municipal	24,969	28,564	29,681	17.8	17.0	17.1
Special district	801	1,076	1,168	0.6	0.6	0.7

Source: U.S. Bureau of the Census. *Public Employment in 1977 (1982, 1986)*. Series GE 77-No. 1, GE82-No. 1. Washington, D.C.: U.S. Government Printing Office, 1978, 1983, 1987.

Intergovernmental Revenues

Figures 1 and 2 illustrate how government is financed in Oklahoma at both state and local levels. Figure 1 treats local government as a single unit and includes intergovernmental revenue from the federal government. Details on counties, municipalities, and school districts are provided in Figure 2. In both figures, the arrows show intergovernmental payments (receipts). Both figures also show "own source" revenue which refers to all general revenue collected at the particular governmental level other than intergovernmental revenue.

Figures 1 and 2 emphasize several important characteristics of Oklahoma's governmental finance system.

- Large amounts of funds move from one level of government to another; on a gross flow basis, roughly one-third of all state and local government revenue in Oklahoma involves intergovernmental flows.
- The federal government is a much more important revenue source to state government than to local jurisdictions.

TABLE 4

General Revenue Sources for State and Local Government
Oklahoma
Fiscal 1987

Revenue Sources	Amount (millions of dollars)	Percent
Intergovernmental revenue from the federal government	$1,277	17.2%
State and local taxes	3,987	53.8
Current charges:		
Education	374	5.1
Hospitals	411	5.6
Other current charges	418	5.6
Interest earnings	588	7.9
Miscellaneous	353	4.8
Total General Revenue	7,408	100.0

Source: U.S. Bureau of the Census. *Government Finances in 1986-87*. Series GF-87-5, Washington, D.C.: U.S. Government Printing Office, 1988, p. 83.

- Local governments as a group rely more heavily on intergovernmental revenue than does the state government.
- Among the types of local government, municipalities are by far the most fiscally self-reliant; the cities' self-reliance would be even more intense if utility revenue were included in the analysis. Even here, however, cities and towns benefit from state maintenance of state highways within their limits.
- There is substantial flow of funds from the state to the counties; the bulk of this is for the construction and maintenance of county roads. The state also provides implicit support for counties by funding district attorneys.
- School districts rely very heavily on the state for funding; intergovernmental revenue from the state is 60 percent greater than own-source revenue.

Trends in the state government's provision of intergovernmental revenue to local government are compared with U.S. trends in Table 5 for the period FY77-87. Key features include the following:

- Oklahoma's state government participation in county finance declines during this period; so does that of the nation, but to a lesser extent.
- Nationwide, cities receive a great deal more revenue from the state level than is true for Oklahoma; the contrast is overstated because of states in which public welfare and elementary and secondary education functions are performed by city governments.
- Oklahoma's public schools rely more heavily on state funding than is the case nationally.
- During FY83-87, Oklahoma state government's share of school district general revenue fell from 64.4 percent to 58.9 percent; nationally intergovernmental revenue from the state rose slightly from 51.3 percent to 52.8 percent.

Oklahoma state government's declining relative share of school district finance after FY83 appears to be related to two factors. First, state tax revenues were more sensitive to the economic recession following the state's energy boom than was the local property tax. Second, the role of the property tax was enhanced further by state-level administration of increased minimum assessment ratios.

The Role of Taxes

Now that total governmental revenues are placed into the perspective of tax and non-tax sources and intergovernmental fiscal flows, it is relatively easy to identify the principal characteristics of Oklahoma's system of taxation. Table 6 shows the state's main taxes and their relative importance for state government, county government, municipalities, and school districts. Although many different taxes are used in Oklahoma, and although there is a myriad of statutory and regulatory detail applicable to tax administration, the fundamentals of the system are relatively easy to describe. The eight major tax types listed in Table 6 accounted for 88.6 percent of all state and local tax collections in FY87. Important features of the system include the following:

- State government uses a much more diverse set of taxes than local government; the sales tax and property tax are virtually the only tax sources available to local jurisdictions.
- The property tax dominates tax sources for counties and school districts; cities emphasize the sales tax and have only limited access to the property tax.
- The Oklahoma Constitution prohibits state-level use of the property tax.
- The general sales tax and the individual income tax account for half of all tax revenues collected by state government.
- The severance tax (primarily the gross production tax on crude oil and natural gas production) is the state's third most important tax source; however, at 14 percent of state tax revenues in FY87, this source has only half the relative importance of its 29 percent share in FY82.
- Taxes and intergovernmental revenues play widely varying relative roles for different types of government; in FY87, Oklahoma's schools received $2.01 in

intergovermental revenue for every $1.00 tax revenue raised locally while municipalities received only 21¢.

The Fiscal Role of the Federal Government

Any discussion of state and/or local government revenues in Oklahoma eventually involves consideration of taxes paid to the federal government. This is usually also accompanied by questions about the extent to which Oklahoma tax dollars sent to Washington are offset by federal government outlays in Oklahoma. Table 7 reports estimates of federal taxes and outlays for Oklahoma during the fiscal year ending September 30, 1987 (the latest available data). Several conclusions are suggested with the caveat that the estimates in Table 7 are rather "soft."

- For every $1 in state and local taxes, Oklahomans paid $2.29 in federal taxes in FY87.
- Individual and corporate income taxes accounted for 56.3 percent of federal taxes paid by Oklahomans in FY87, but only 19.1 percent of state-local taxes.
- Federal outlays in Oklahoma appear to be roughly equal to federal taxes paid by Oklahomans.

Revenue from Borrowing

Over the years many capital projects and loans to government entities and individuals are financed through borrowing by state and local governments. This includes borrowing by trust authorities established with government as the beneficiary as well as debt backed with the full faith and credit of the issuing government unit. Thorough data on the total debt issued by Oklahoma's governments and trusts does not exist. The U.S. Bureau of the Census reported the following for Oklahoma as outstanding debt at the end of FY87 [*Government Finances in 1986-87*, GF-87-5, p. 36]:

FIGURE 1

Intergovernmental and Own-Source Revenue Flows in Oklahoma, Fiscal 1987 (amounts in millions of dollars)

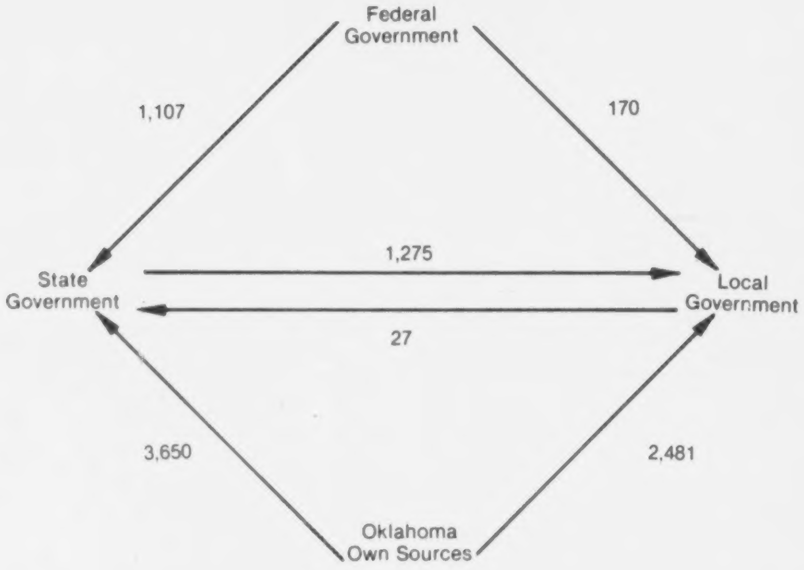
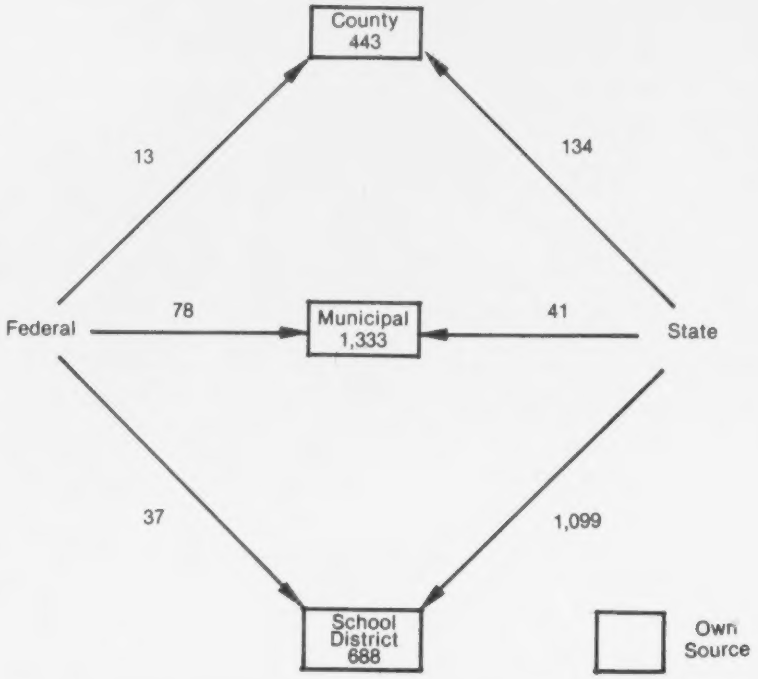


FIGURE 2

Intergovernmental Revenue for County, Municipal and School District Units of Local Government, Oklahoma, Fiscal 1987 (amounts in millions of dollars)



Source: U.S. Bureau of the Census. *Government Finances in 1986-87.* Series GF-87-5, Washington, D.C.: U.S. Government Printing Office, 1988, p. 83.

	(millions)
State	$4,105
Counties	1,133
Municipalities	2,536
School districts	387
Special districts	382
Total	$8,544

Net borrowing (borrowing less repayments) during FY87 was reported to be $281 million.

State Government Appropriations and Expenditures

State government is the focal point for broad policy-making for local as well as state government. State decisions about intergovernmental payments to local government, state statutes and regulations concerning the conduct and responsibilities of local government, and the state's general constitutional framework control much of local as well as state public finance in Oklahoma. The following discussion introduces the linkage between appropriations and expenditures, explores priorities exhibited by the FY85 and FY90 pattern of appropriations, and suggests the most pressing priorities likely to be encountered in the 1990s.

Appropriations and Expenditures

Oklahoma state tax revenues become available for direct expenditure or for intergovernmental payment through two basic procedures. The most prominent procedure is through the annual legislative appropriations process. This usually involves authorization for expenditure during a given fiscal year, although some appropriated funds are available for expenditure in more than one fiscal year. Because nearly three-quarters of state tax revenues flow into Oklahoma's general revenue fund from which appropriations are made, it is often impossible to connect specific tax sources with specific expenditures. One important exception involves earmarked taxes.

When a tax is earmarked, all or a fixed proportion of collections is automatically channelled to specific uses. For example, 35 percent of Oklahoma's motor vehicle license receipts flows to local schools, and a portion of the cigarette tax is used if needed to service state building bonds. Earmarking reduces the annual work that the legislature must accomplish with the appropriations process, and may make it easier for the recipient state agency or local jurisdiction to make long-range budget plans. Moreover, in some instances such as the allocation of motor fuel taxes to highway construction and maintenance, an earmarked tax performs much as a user fee; those using the state facility help pay for it.

In recent years, however, the Oklahoma Legislature has greatly reduced its use of tax earmarking. Lack of annual legislative oversight through the appropriations process is a principal reason for this shift in tax/expenditure policy. In addition, difficult budget problems associated with the shift from a boom to a bust economy have emphasized to the governor and the legislature the need to have as much flexibility as possible in the budget planning process. Earmarking, of course, removes the earmarked revenue/expenditure from direct budgetary discretion.

TABLE 5

Local Government Intergovernmental Revenue from State Government, Oklahoma and United States Selected Years, Fiscal 1977 - 1987

Year	Revenue from State as a Percent of General Revenue County	 Municipal	 School District
Oklahoma			
1977	34.0%	5.7%	57.0%
1983	33.4	2.7	64.4
1984	27.9	2.6	63.6
1985	25.6	3.0	61.0
1986	23.3	3.0	62.1
1987	22.1	2.8	58.9
United States			
1977	34.5	23.4	46.8
1983	32.3	20.3	51.3
1984	32.0	19.6	51.6
1985	31.2	20.1	52.0
1986	31.8	20.2	52.7
1987	31.7	20.3	52.8

Source: U.S. Bureau of the Census, *Governmental Finances*, Series GF, Washington, D.C.: U.S. Government Printing Office, 1977, 1983-1987, pp. 46, 83.

Many of state government's non-tax revenues are automatically allocated for specific programs of expenditures. Since the end of revenue sharing, this is true of virtually all federal funds received by the state. Other examples include higher education tuition, fees remaining with collecting institutions, receipts from the sales of services such as those of hospitals, and the allocation of revenue from school lands to education.

Overall, legislative appropriations account for less than half of all state government expenditures. In FY88, for example total appropriations were 43.5 percent of reported outlays from Treasury Funds (Table 8). Moreover, there is great variation in the degree to which appropriations finance the different functions of government. For example, in FY88 appropriations equalled 84.7 percent of Legal and Judiciary outlays, 89.8 percent of Corrections, and 71.7 percent of Mental Health. At the other end of the spectrum, Transportation received almost no appropriations because of its funding from earmarked fuel taxes.

Appropriations and Priorities: FY85 and FY90

Just as the total pattern of state and local government expenditures remains fairly stable over time, so too does the functional allocation of appropriations. Table 9 shows the functional breakdown of legislative appropriations in FY85 and FY90 with percentage shares carried to two digits. The patterns look rather similar in both years, even though the actual money involved rose from $2.2 billion to nearly $2.7 billion. Roughly half the appropriations goes to Education, and another fifth to the Department of Human Services.

A closer look at the FY85 and FY90 patterns suggests some changing priorities during the period. The third column in Table 9 records the difference in percentage shares for the functions between the two years; the algebraic sum of these differences adds to zero. Relatively large reductions in the shares were recorded for Transportation (-4.44 points), Supplemental Appropriations (-1.33 points) and Capital Outlay/Special Projects (-0.32 points). Increased earmarked motor fuel tax rates permitted the Oklahoma Legislature to essentially abolish highway appropriations in FY90, the Governor had some success in fighting the "pork" component of Special Projects, and a more stable state finance picture may have reduced the need for Supplemental Appropriations.

What functions picked up the lion's share of the 6.09 percentage points given up by Transportation, Supplementals, and Special Projects? The answer is easy to determine from Table 9. Four major functions gained most of what was reallocated. Education's share rose 2.01 points, the Department of Human Services (DHS) gained 1.45 points, and Public Safety (Corrections and Law Enforcement) rose 1.27 points. General Government (the hard-core of the executive branch) expanded by 1.00 point, but this expanded share was caused largely by the appropriations necessary to offset the elimination of earmarked revenues to the Oklahoma Tax Commission. This suggests that three broad components — Education, DHS, and Public Safety—occupied a higher priority during the 1989 legislative session than during 1984.

TABLE 6

Oklahoma's Tax System
Fiscal 1987

Type of Tax	All State and Local	State	County	Municipal	School District
Total Taxes (millions of dollars)	$3,987	$2,669	$195	$559	$564
Percent by Type:					
General sales	26.3%	23.0%	3.1%	76.9%	—
Poperty	20.1	—	95.9	10.6	98.6%
Individual income	17.0	25.4	—	—	—
Severance	9.3	13.9	—	—	—
Motor vehicle license	5.5	8.2	—	—	—
Motor fuel	5.1	7.6	—	—	—
Alcoholic beverage and tobacco taxes	3.2	4.8	—	—	—
Corporate income	2.1	3.1	—	—	—
Other	11.4	14.0	1.0	12.5	1.4
Total	100.0	100.0	100.0	100.0	100.0
Addendum: intergovernmental revenue per $1.00 of tax receipts	$.65	$.42	$.75	$.21	$2.01

Source: U.S. Bureau of the Census. *Government Finances in 1986-87.* Series GF-87-5. Washington, D.C.: U.S. Government Printing Office, 1988, p. 83.

TABLE 7

Federal Government Tax Burden and Distribution of Funds
in Oklahoma
Fiscal 1987[a]

Tax Burden	Amount (millions of dollars)	Percent
Federal Tax Burden:		
Individual income tax	$4,360	43.7%
Social insurance taxes	3,450	34.6
Corporate income tax	1,260	12.6
Highway trust fund taxes	267	2.7
Alcoholic beverage and tobacco taxes	134	1.3
Other excise taxes	275	2.8
Estate and gift taxes	229	2.3
Total tax burden	9,975	100.0
Federal Funds Distribution:		
Defense/nondefense		
Defense	2,348	23.3
Nondefense	7,721	76.7
Total distribution	10,069	100.0
Selected types		
Direct payments to individuals	5,209	51.7
Procurement	821	8.2
Grants to state-local governments	1,317	13.1
Salaries and wages	2,143	21.3
Other programs	579	5.7
Total distribution	10,069	100.0

Source: Tax burden: Tax Foundation. *Facts and Figures on Government Finance, 1988-1989 edition.* Baltimore: John Hopkins University Press, 1988, p. 148; federal funds: U.S. Bureau of the Census. *Statistical Abstract of the United States, 1989.* Washington, D.C.: U.S. Government Printing Office, 1989, p. 312.

[a] Year ending September 30.

TABLE 8

Appropriations as a Percent of Expenditures From State Treasury Funds Oklahoma State Government Fiscal 1988

Function of Government	Percent
Education:	
Higher education	51.2%
State aid to public schools	64.2
Vocational and technical education	77.6
Other education functions	146.9
Total education	60.5
General Government	48.9
Health Services:	
Public health & medical assistance	47.3
Mental health	71.7
Total health services	61.5
Legal and judiciary	84.7
Museums	84.4
Natural resources	46.7
Public Safety:	
Corrections:	89.8
Other public safety related	69.3
Total public safety	81.1
Regulatory Services	18.3
Social Services:	
Department of Human Services	35.5
Other social service related	4.3
Total social services	29.5
Transportation	1.5
Total	

Source: Office of State Finance, Schedules I and III, 1987, 1988.

TABLE 9

Relative Importance and Growth of Appropriations Components, Oklahoma State Government Fiscal Years 1985 and 1990

	Percent of Total Appropriations		
Function of Government	1985	1990	Difference
Education:			
Higher education	16.59%	17.00%	0.41%
State aid to public schools	32.10	32.70	0.60
Vocational and technical education	2.22	2.52	0.30
Other education functions	0.45	1.14	0.69
Total education	51.36	53.37	2.01
General Government	3.55	4.55	1.00
Health Services:			
Public health & medical assistance	1.82	1.83	0.01
Mental health	3.74	3.65	-0.09
Total health services	5.56	5.47	-0.09
Legal and judiciary	1.93	2.19	0.26
Museums	0.16	0.16	0.00
Natural resources	1.70	1.66	-0.04
Public Safety:			
Corrections:	4.45	5.25	0.80
Other public safety related	2.10	2.57	0.47
Total public safety	6.55	7.82	1.27
Regulatory Services	0.46	0.68	0.22
Social Services:			
Department of Human Services	19.84	21.29	1.45
Other social service related	0.67	0.68	0.01
Total social services	20.51	21.97	1.46
Transportation	4.77	0.33	-4.44
Total operations appropriations	96.55	98.20	1.65
Supplementals for FY-88	2.41	1.08	-1.33
Capital outlay/special projects	1.04	0.72	-0.32
Total	100.00	100.00	0.00

Source: Office of State Finance, Schedules I, 1984, 1989.

State Priorities for the 1990s

The 1985-90 appropriations pattern brings to mind three sources of financial pressure which are bound to be important in setting Oklahoma state finance priorities during the '90s.

- Education will continue to gain significance as labor force skill requirements escalate rapidly and the U.S. emphasizes R&D activities to become more competitive worldwide.
- Drug-related and other types of crime will continue to stimulate demand for better law enforcement and expanded corrections systems.
- Health care costs will continue to rise at a rapid pace; with an ageing population and growing uncompensated medical care, appropriations to the Department of Human Services will continue to increase more rapidly than most other functions. The state's health care costs will also rise because of its operation of health insurance programs for its own employees and for teachers.

One further pressure for increased state spending deserves special emphasis. The '90s will witness a renewed strong tendency for the state's population to concentrate in urban areas—particularly in the large metropolitan centers. There is growing need to upgrade and expand municipal infrastructure, i.e. sewerage, water, streets, airports, parks, and other public works. State government itself has not had a capital improvements program since 1983. Added to this are serious deficiencies in Oklahoma's rural and intercity road network. In 1985-86, a Governor's Advisory Task Force on Infrastructure estimated conservatively an annual shortfall of infrastructure outlays of $450 million per year for every year during a period ending in 2000. As Table 5 indicates, there are other states in which state government provides a much larger flow of funds to municipalities. If infrastructure problems become more acute in Oklahoma, or if the state decides that major improvements are a necessary condition for significant economic growth, state government may be asked to spend much more in this field.

The following sources are useful for more information on state and local government finance.

Oklahoma State Government Expenditures in Brief. Oklahoma City: The Kerr Foundation, Inc. and the Grayce B. Kerr Funds, Inc.

Center for Economic and Management Research. *Statistical Abstract of Oklahoma.* Norman: University of Oklahoma.

U.S. Bureau of the Census. *Statistical Abstract of the United States.* Washington, D.C.: U.S. Government Printing Office.

U.S. Bureau of the Census. Government Finance Series including *State Government Tax Collections, State Government Finances, City Government Finances, Government Finances,* and *County Government Finances.* Washington, D.C.: U.S. Government Printing Office.

U.S. Advisory Commission on Intergovernmental Relations. *Significant Features of Fiscal Federalism.* Washington, D.C.: ACIR.

Tax Foundation. *Facts & Figures on Government Finance.* Baltimore: The Johns Hopkins University Press.

Larkin Warner is Regents Professor of Economics at Oklahoma State University.

Oklahoma's Widening Personal Income Gap

GERALD M. LAGE

INCOME COMPARISONS AMONG persons or regions in a market-oriented economy often serve as both an index of productive contributions and a measure of economic well-being for individuals, communities and states. Thus, as the level of Oklahoma's per capita personal income available for consumption, taxes and savings grew from 85 percent of the national average in 1970 to almost parity with the rest of the country in 1982, Oklahomans looked with pride at their good fortune, and presumably, good management, over the phenomenal decade of growth.

Since 1982, however, U.S. per capita personal income growth continued on its historical trend (see Figure 1) while Oklahoma's level grew considerably slower than the rate of inflation.[1] By 1987 Oklahoma's relative personal income per citizen had fallen back to only 81 percent of the national average, the lowest level of the ratio in the last 30 years. (*1989 Oklahoma Economic Outlook*.)

How could the per capita personal income of the citizens of Oklahoma have fallen so far behind the national average so fast? But then, after so many decades of lagging behind, how could it have caught up to the national average in the first place?

Complete answers to these questions require a detailed examination of regional responses to national and international economic forces and a careful analysis of state economic policies to unravel the system of incentives and barriers to economic activity of the private sector. The purpose of this brief note is to address the much simpler task of trying to identify the major sources of the widening gap so that more detailed policy research may recommend actions and incentives to attempt to reverse the alarming trends of the last half decade.

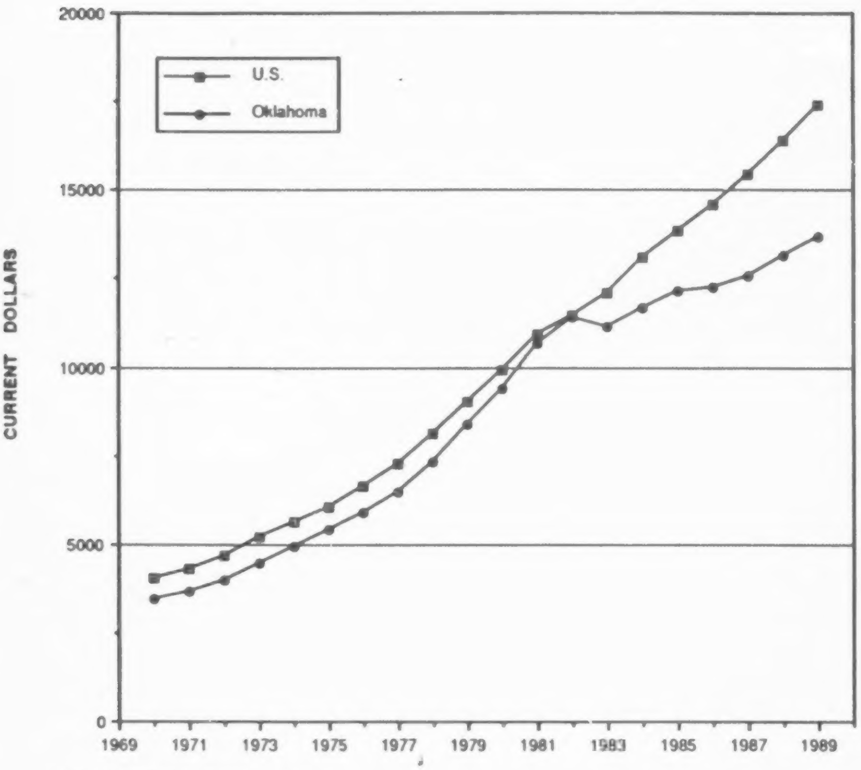
The conclusion that can be reached by reviewing recent personal income growth is that the narrowing of the per capita personal income gap during the 1970s can be related to the state's relative gains in almost every category of payments and a very substantial increase in the proportion of the state's population actively employed. Likewise, the source of the decline is broad-based, yet dominated by two substantial effects. First, Oklahoma's share of the workforce working at full and/or part-time jobs declined since 1982 while the national average rose substantially. And, second, there has been a low and relatively declining level of earnings-per-worker in major sectors of the state economy.

Analysis

The aggregate components of Oklahoma and U.S. per capita personal income for 1970, 1982 and 1987 are shown in Table 1. For each year, by definition of the U.S. Bureau of Economic Analysis (BEA), per capita income is computed as the sum of the following components: (1) the per capita dividends, interest and rent payments to residents of the state; (2) the per capita transfer payments that are paid to residents in a given period (the only payments not based on current production); (3) the earnings per capita derived by multiplying the earnings per employee times the employee to total population ratio (a workforce participation concept); and, (4) a residual that subtracts individuals' contributions to social insurance from personal income and adjusts the earnings for differences in individual's state of residence and state of employment.

The data reveal the general pattern of a closing state-national gap for aggregate per capita personal income and for each of its components (except for per capita transfer payments) from 1970 to 1982 and the reverse process (with the same exception) from 1982 to 1987. The ratio of Oklahoma to U.S. earnings per employee follows an almost

U.S. Versus Oklahoma Per Capita Income



Source: *Oklahoma Economic Outlook*

TABLE 1

Per Capita Personal Income Analysis

	Oklahoma			United States		
	1970	1982	1987	1970	1982	1987
Per Capita Personal Income	$3,437 (.85)[a]	$11,391 (.99)	$12,552 (.81)	$4,051	$11,481	$15,481
Dividends, Interest & Rent Per Capita	417 (.78)	1,768 (.92)	2,132 (.82)	538	1,928	2,605
Transfer Payments Per Capita	432 (1.02)	1,614 (.91)	2,112 (.94)	422	1,774	2,254
Earnings Per Employee	6,283 (.85)	16,647 (.98)	18,155 (.85)	7,329	17,030	21,305
Employee/Population Ratio	.427 (.97)	.505 (1.04)	.482 (.91)	.440	.485	.532
Earnings Per Capita	2,672 (.83)	8,410 (1.02)	8,753 (.77)	3,228	8,263	11,328
Residual Residence Adjustment & Personal Contributions to Social Insurance	−84 (.61)	−401 (.83)	−445 (.63)	−137	−484	−706

Source: Personal Income Data are from the U.S. Department of Commerce, Bureau of Economic Analysis, data tapes.

[a] Figures in ( ) represent ratios to corresponding national annual averages of the same year.

identical pattern to that of per capita personal income, which is not surprising since earnings are the largest single component of personal income. Notice, however, that even as the income gap almost closes in 1982, the individual components of per capita income in Oklahoma remain below the corresponding national averages except for one component—*earnings per capita in Oklahoma rises above the national average despite a lower value of earnings per employee because a higher percentage of the state population is employed that year than is true for the nation as a whole.* In a symmetrical way, the fall in relative per capita personal income from 1982 to 1987 is accentuated because the share of the state's population working at full or part-time jobs in Oklahoma falls by two percentage points as the national ratio rises by almost five percentage points. As these factors reinforce each other, *Oklahoma's per capita earnings fall drastically from above the national average in 1982 to just over three-fourths of the national level in 1987.* Declining job opportunities with the regional recession and severe reductions in earnings per worker add to the lower nonincome payments to prolong and reinforce Oklahoma's inflation-adjusted income recession for a total reduction of about 7 percent since 1982.

The role played by the ratio of Oklahomans with one or more jobs to the total population of the state compared to the national ratio in explaining the closing of the income gap has not been widely discussed, although the rapidly growing number of job opportunities at attractive rates of pay was obviously a salient feature of the 1970s. The downside in the recessionary environment of the mid-1980s has been substantially reduced employment opportunities and "discouraged-worker" withdrawals from the workforce exceeding losses in the state's population. Had 50.5 percent of Oklahomans been employed in 1987, rather than the actual 48.2 percent, at the 1987 rate of earnings per worker, the earnings per capita would have increased by $415 and reduced the size of the 1987 per capita personal income gap by 15 percent. Had Oklahoma matched the national ratio of 53.2 percent of the population with jobs at the 1987 state earnings rate, per capita earnings would have increased by $905 and the 1987 per capita personal income gap would have been reduced by nearly one-third.

Obviously, policies that expand the typical occupational and industrial employment opportunities are a major consideration in stopping the deterioration of Oklahoma's economic well-being. The lack of such opportunities are not, however, the largest single source of the deficiency. The relatively low state average of aggregate earnings per employee holds that infamous distinction. If working Oklahomans in 1987 had been paid the U.S. value of earnings per employee of $21,305 rather than the state average of $18,155, the Oklahoma earnings per capita would have increased by $1,516 and the per capita personal income gap would have decreased by 52 percent.[2] Why should the Oklahoma average earnings per employee be so much lower than the national average?

A slightly advanced step in the analysis of the *income gap* can be taken by asking whether the *earnings gap* is explained to a larger degree by (a) differences in the employment distribution in Oklahoma relative to the national industrial pattern—the industrial structure effect, or (b) differences in earnings per employee by type of industry locally vs. the national average—the wage and occupation effect.

Table 2 summarizes the results of two hypothetical calculations to compare with the actual pattern of earnings per employee observed in the three years of the analysis. Pattern "A" is determined by computing the earnings per employee in Oklahoma assuming *Oklahoma wages were paid to the U.S. distribution of employment* in the dozen aggregate divisions of the economy listed in Table 3. Pattern "B" results from the assumption of *U.S. wages paid to the Oklahoma employment distribution* of full and part-time workers.

TABLE 2

Earnings Per Employee
Oklahoma and the U.S.

	Actual	Pattern "A" Oklahoma Pay U.S. Jobs	Pattern "B" U.S. Pay Oklahoma Jobs
Oklahoma			
1970	$ 6,263	$ 6,464	$ 7,137
1982	16,647	16,422	17,659
1987	18,155	18,589	21,180
United States			
1970	7,329		
1982	17,030		
1987	21,305		
U.S. - Oklahoma Earnings Gap			
1970	1,066	865	192
1982	383	608	-629
1987	3,150	2,716	125

Source: U.S. Department of Commerce, Bureau of Economic Analysis and author's calculations.

The calculation in column 3 of earnings per employee for Pattern A—assuming Oklahoma had the national distribution of jobs by industry, but workers were paid the Oklahoma earnings per employee—results in a very modest increase (except for 1982) in the aggregate earnings per employee average for the entire state. Indeed, in 1982 with the national industrial structure, the state would have observed a larger income gap than actually occurred since this year was deliberately chosen as the best in recent times for the state economy.

The impact of being able to substitute national for state earnings per worker in each specific industry, while retaining the job distribution actually observed in the state in the relevant year (see column 4, Pattern B), is a dramatic reduction of the income gap for both 1970 and 1987. It is also a substantial reversal to Oklahoma's advantage in the boom year of 1982 when substantially better national earnings rates are applied to large employee shares in mining, construction, and other booming sectors in the state.

The overall conclusion seems clear enough. The largest single cause of Oklahoma's income recession is relatively low earnings per capita. This is caused by a level of earnings paid per employee substantially below the national average. In turn, this has been caused more substantially by low earnings in each major industry than by any net effects of an industrial structure in Oklahoma that differs from the rest of the U.S.[3]

The pervasiveness of Oklahoma's low employee earnings in all major economic sectors is born out by the summary data in Table 3. This shows the differences in earnings per employee and the differences in the employment distributions of Oklahoma and the U.S. With a few exceptions in 1982, the level of earnings paid per employee in Oklahoma is consistently and substantially below the national average earnings rates.

The three right-hand-side columns of employment differences verify that Oklahoma employment opportunities are relatively more concentrated in farming, mining and government employment. Two of the Oklahoma industries, farming and mining, paid considerably less than average earnings per employee in 1987 while the local disadvantage for government workers was slightly less than average.

Oklahoma's share of employment in manufacturing is relatively low compared to the national average, but the earnings differences are far less than in most other sectors with substantial employment levels. The deterioration of mining earnings per employee (and to nearly the same extent in construction and finance, insurance and real estate) is painfully obvious with a local

TABLE 3

Earnings Per Employee and Employment Share Differences
U.S. Minus Oklahoma

	1982 Employment Share - Oklahoma (percent)	Earnings/Employee Difference U.S. - Oklahoma (current dollars)			Employment Distribution Difference U.S. - Oklahoma (percent)		
		1970	1982	1987	1970	1982	1987
Total	100.0	1,070	380	3,150	0.0	0.0	0.0
Farm	5.4	800	−120	3,960	−4.3	−2.2	−3.0
Agriculture, Forestry & Fisheries	0.5	920	−1,570	1,860	− .1	.3	.3
Mining	8.3	1,160	5,820	8,760	−3.4	−7.1	−4.2
Construction	5.5	1,750	1,930	4,540	− .2	− .8	.5
Manufacturing	11.4	830	240	1,570	9.4	5.8	4.9
Transportation, Public Utilities	4.9	630	430	930	.1	.1	-0-
Wholesale Trade	4.9	330	−670	3,490	.6	.1	.9
Retail Trade	15.6	550	−420	890	-0-	.4	.5
Finance, Insurance and Real Estate	6.1	1,130	1,140	5,630	.8	.9	.9
Services	19.0	1,080	730	3,130	1.5	4.3	3.1
Government	18.3	830	1,520	2,850	−4.5	−1.8	−3.9

Data Sources: Employment Statistics: Bureau of Economic Analysis, Full and Part-time Employment. Earnings Data: Bureau of Economic Analysis, Computer Files.

earnings disadvantage nearly three times the average level for all sectors. There simply are no sectors with substantial numbers of workers, except for manufacturing, where local earnings per employee approach the national level and thereby contribute a comparative advantage for closing the per capita personal income gap.

Conclusions

The analysis just reviewed provides evidence that Oklahoma's per capita personal income was, ever-so-briefly, able to touch the national average level as a result of narrowing gaps of the major income components plus a very hefty push from citizens' increased participation in the workforce with full and part-time jobs. The extremely rapid and devastating decline was likewise attributed to a combination of factors affecting all the components, but mostly to two substantial effects—a reduction in the percentage of the state population with jobs while nationally the rate has been rising, and the low levels of earnings per employee in all major sectors of the economy.

The lists of most likely fundamental causes of the income recession and of potential policies which might help move Oklahoma back into the mainstream of economic growth are far too long to catalog here.[4] Nevertheless, a few comments might indicate the need for further analysis as the legislature and professional economic development organizations such as Oklahoma Futures contemplate state economic policies.

Relatively little can be done by the state to increase the overall level of economic activity. Competition among the states for existing businesses is generally considered to be nonproductive from a broad perspective. Hence, economic development initiatives that promote new business formation, export market development and expansion of existing business have become the accepted fare. (Fosler, 1988)

What appears to be crucial to the next stage of policy analysis is a careful detailed investigation of why earnings per employee appear to be substantially below their national counterparts in almost all major industries making up the broad sectors of the economy shown in Table 3. The types of hypotheses that come to mind as possible explanations include the following:

(a) Might Oklahoma's costs of living and doing business be enough lower than nationally so that real (cost-of-living adjusted) earnings are, in fact, near the national average?

(b) Can we substantiate the results found here that the net effect of the state's industrial structure is neutral, with relative earnings advantages in some industries cancelling disadvantages elsewhere? Or, are we beginning to observe an industrial mix disadvantage with the loss of well-paying professional positions in the petroleum refining industry and related chemical production, a small and slow-growing business services sector and a failure to observe any substantial gains in the high technology businesses? (See Lage and Doescher, 1989.)

(c) Is the job structure and management/production mix of Oklahoma industries such that workers have relatively fewer opportunities in the education-intensive, higher-paying job classifications? If so, why? Do state policies encourage location mostly of plants and businesses that provide fabrication and assembly, but not management, financing and research functions? (Lage, July 1984)

Undoubtedly, a more refined analysis of the Oklahoma income gap will uncover cause and effect relationships that will suggest alternatives for wise use of state economic policies. Such analysis, however, must be the subject of later studies.

Notes

[1] Since this research was essentially completed, a new study was released comparing personal income changes in nine regions of the nation. (Browne, 1989) The extremes in personal income growth are shown by the following quote from the introduction to that work: "New England's per capita income rose from 4 percent above the national average in 1979 to 20 percent above in 1987. Over the same period per capita income in the West South Central states fell from 7 percent below the national average to 15 percent below." See also the work by Friedenberg and DePass, 1989.

[2] The remainder of the gap, about 12 percent, is due to differences in the nonlabor income and transfer payment components. Variations in residence adjustments are ignored for this approximation.

[3] As further evidence of this point, calculations of the author indicate that if Oklahoma earnings per worker in each 2-digit manufacturing industry equalled the national average, the 1988 average hourly earnings resulting from the state's industrial mix of $10.03 would have exceeded the national average of $9.64.

[4] See Olson, 1986, for a review of general economic development initiatives in Oklahoma and Lage, 1988, for international trade development recommendations.

References

Browne, Lynn E. "Shifting Regional Fortunes: The Wheel Turns." *New England Economic Review*, Federal Reserve Bank of Boston, (May/June 1989).

Fosler, R. Scott. *The New Economic Role of American States*. New York: Oxford University Press, (1988).

Friedenberg, Howard L. and Rudolph E. DePass. "Per Capita Personal Income: Continued Widening of Regional Differences in 1988." *Survey of Current Business*, U.S. Department of Commerce, Bureau of Economic Analysis, (April 1989): 35-36.

Lage, Gerald M. and Tabitha Doescher, "Oklahoma High Technology Industrial Performance 1982-1987." *Oklahoma Business Bulletin*, Vol. 57, No. 9 (September 1989): 20-26.

Lage, Gerald M. "Occupational Patterns in the Oklahoma Manufacturing Industries." Oklahoma State University, College of Business Administration, Working Paper, (July 1989).

Lage, Gerald M. "International Trade Development in Oklahoma: A Synopsis of the Problem and a Review of the Literature." *Oklahoma Business Bulletin*, Vol. 57, No. 9 (September 1988): 24-32.

Oklahoma Economic Outlook. Office of Business and Economic Research, College of Business Administration, Oklahoma State University, Stillwater, OK, (January 1989).

Olson, Kent W. "Economic Development in Oklahoma: A Synopsis of the Problem and a Review of the Literature." Report to the Oklahoma Academy of State Goals, Oklahoma City, OK, (July 1986).

Gerald M. Lage is Professor of Economics at Oklahoma State University.

U8130-1

OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF OKLAHOMA

CONGRESSIONAL INFO. SERVICE/SRI
ATTN: ROBERTA B. MASON
4520 EAST-WEST HIGHWAY
BETHESDA MD 20814

ISSN 0030-1671

January 1990

VOL. 58, ISSUE 1

SUMMARY OF INDICATORS

Category	10 Mos. '89	10 Mos. '88	Oct. '89	Percentage Change 10 Mos. '89/'88	Percentage Change Oct./Sept. '89
Personal Income (Monthly Average)					
Unadjusted ($000,000)	3,806	3,596	3,901	5.8	0.9
Adjusted for CPI ($000,000)	3,082	3,053	3,106	0.9	0.4
Crude Oil Production (000 bbl)	90,675	99,630	8,870	-9.0	1.5
Natural Gas Production (000 mcf)[a]	1,739,731	1,769,910	151,054	-1.7	-9.2
Industrial Power Sales (000,000 Kwh)[b]	7,371	7,132	747	3.4	-5.6
Total Bank Deposits (Monthly Average) ($000,000)[c]					
Demand	7,404	7,558	7,389	-2.0	1.2
Savings	23,474	24,439	23,076	-4.0	-1.3
Savings and Loan Associations ($000,000)					
Assets	10,576	10,521	10,107	0.5	-2.1
Mortgage Loans Closed	419	545	42	-23.0	5.0
Employment					
Total Labor Force (000)[d]	1,527.2	1,534.0	1,520.5	-0.5	-0.3
Total Employment (000)	1,438.7	1,428.6	1,446.5	0.7	0.0
Unemployment Rate (%)	5.9	6.9	5.6	—	—
Wage and Salary Employment (000)	1,138.0	1,130.6	1,148.8	0.6	0.8
General Business Index	96.5	94.7	98.0	1.9	0.8

Note: Includes revisions.

[a] Natural Gas includes casinghead gas.

[b] Sales of larger privately owned utility companies.

[c] Total deposits of all depository institutions.

[d] Civilian Labor Force.

RETAIL TRADE IN SELECTED CITIES
($000)

City	Oct. '89 Adjusted	Oct. '89 Unadjusted	Adjusted '89/'88 10 Mos.	Adjusted 1989 Oct./Sept.
Ada	11,910	12,083	-1.7	-4.9
Altus	11,374	11,530	-5.4	-15.8
Alva	3,564	3,607	-6.9	-2.4
Anadarko	3,832	3,853	-4.6	-1.6
Ardmore	17,457	17,511	-4.0	-8.7
Bartlesville	25,008	24,098	0.1	0.0
Blackwell	2,777	2,815	-6.2	-10.2
Broken Arrow	26,396	25,747	-2.0	-2.2
Chickasha	9,780	9,700	-6.4	-1.3
Clinton	5,977	6,081	-7.3	-13.4
Cushing	4,541	4,439	-7.0	-1.8
Del City	9,043	9,026	-5.3	-0.9
Duncan	17,011	15,924	-9.7	1.4
Durant	9,423	9,623	-5.2	-2.4
Edmond	23,916	24,061	1.8	1.4
Elk City	7,442	7,415	-3.9	-12.0
El Reno	8,426	8,380	-2.5	-3.8
Guthrie	5,553	5,540	-6.4	-4.5
Guymon	4,887	4,820	-0.6	-17.3
Henryetta	3,525	3,528	-5.3	0.1
Hobart	2,263	2,288	-6.6	-21.0
Holdenville	2,113	2,126	-8.5	-10.3
Hugo	4,048	4,193	-5.3	-5.8
Idabel	5,346	5,095	-2.0	-6.0
Lawton	38,911	37,724	-7.2	-7.4
McAlester	12,990	13,238	-5.1	-2.7
Miami	10,000	9,830	-4.7	-5.1
Midwest City	46,265	44,013	-4.2	-2.1
Moore	15,331	15,006	-9.5	-6.1
Muskogee	24,320	24,923	-2.6	-8.0
Norman	47,918	48,534	-4.7	-3.8
Oklahoma City	259,948	250,726	-4.4	-4.8
Okmulgee	5,452	5,370	-5.3	-3.2
Pauls Valley	5,027	5,143	-6.3	6.5
Pawhuska	1,841	1,735	-2.8	-1.8
Ponca City	18,356	18,164	2.7	-2.0
Poteau	6,358	6,165	-5.2	3.9
Sand Springs	9,256	9,066	0.5	-4.1
Sapulpa	8,561	8,834	-3.5	-5.7
Seminole	4,409	4,381	-7.1	-4.4
Shawnee	21,861	22,078	4.5	-0.4
Stillwater	17,553	18,299	-1.6	0.1
Tahlequah	8,124	8,286	-1.1	0.8
Tulsa	276,853	270,343	-1.5	-0.8
Watonga	1,423	1,474	-0.9	-2.0
Weatherford	6,676	6,643	-2.1	-11.6
Wewoka	1,330	1,344	-8.5	-3.9
Woodward	10,541	10,670	-4.9	-7.7
Total	1.084.916	1.065.472	-3.3	-3.4

RETAIL TRADE IN METRO AREAS AND STATE
($000)

					Percentage Change		
	10 Mos. '89	10 Mos. '88	Oct. '89		10 Mos. '89/'88	Oct./Sept. '89	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	1,637,864	1,536,731	163,948	160,842	6.6	-0.3	-3.5
Apparel	284,040	274,945	31,205	28,032	3.3	-0.3	-4.8
General Merchandise Group	975,496	982,383	94,169	83,278	-0.7	-6.7	-4.2
Furniture & Appliances	238,797	224,917	20,697	19,628	6.2	-10.8	-19.8
Lumber & Building Materials	156,863	174,616	17,483	18,804	-10.2	8.7	11.8
Auto Dealers	1,191,474	1,444,837	114,322	119,606	-17.5	-7.2	-5.7
Service Stations	350,356	325,606	37,118	34,522	7.6	1.9	-9.4
All Other	374,702	341,537	45,070	46,122	9.7	8.5	8.7
Total	5,209,592	5,305,572	524,012	510,834	-1.8	-2.4	-3.9
TULSA MSA							
Food Group	1,217,608	1,155,685	122,770	121,446	5.4	-2.8	-2.5
Apparel	194,192	198,016	20,695	18,885	-1.9	-3.4	-7.4
General Merchandise Group	758,428	713,349	80,306	74,073	6.3	-3.9	-1.1
Furniture & Appliances	185,269	179,181	23,180	21,075	3.4	39.6	31.0
Lumber & Building Materials	152,447	142,832	17,929	18,505	6.7	15.7	17.4
Auto Dealers	745,796	905,704	72,401	75,090	-17.7	-7.1	-5.7
Service Stations	214,304	199,066	22,006	21,153	7.7	1.1	-9.4
All Other	201,138	200,047	22,981	21,666	0.5	6.6	5.8
Total	3,669,182	3,693,880	382,268	371,893	-0.7	-0.6	-0.9
ENID MSA							
Food Group	90,102	84,329	8,642	8,744	6.8	-9.5	-8.5
Apparel	16,625	16,184	1,767	1,606	2.7	-3.7	-6.0
General Merchandise Group	73,883	72,066	7,994	7,374	2.5	-7.2	1.2
Furniture & Appliances	12,147	11,786	2,123	2,104	3.1	89.9	101.0
Lumber & Building Materials	10,299	9,314	1,153	1,339	10.6	-2.4	9.4
Auto Dealers	53,026	64,285	5,034	5,319	-17.5	-7.5	-5.7
Service Stations	20,041	18,612	2,068	1,980	7.7	1.2	-9.4
All Other	18,335	18,579	1,418	1,551	-1.3	-10.8	-11.8
Total	294,458	295,155	30,199	30,017	-0.2	-3.7	-1.3
LAWTON MSA							
Food Group	124,808	131,511	9,992	10,095	-5.1	-14.7	-8.7
Apparel	20,802	20,534	2,161	1,959	1.3	-5.2	-13.2
General Merchandise Group	123,111	125,159	12,474	11,452	-1.6	-4.6	3.4
Furniture & Appliances	21,164	22,383	2,021	1,856	-5.4	-7.3	-10.6
Lumber & Building Materials	18,905	19,128	2,014	1,959	-1.2	-1.2	-5.1
Auto Dealers	93,993	114,023	9,057	9,444	-17.6	-7.1	-5.7
Service Stations	30,638	28,492	3,375	3,024	7.5	2.1	-9.4
All Other	18,819	20,825	859	1,023	-9.6	-19.9	-13.7
Total	452,240	482,055	41,953	40,812	-6.2	-7.6	-5.2
MUSKOGEE AREA							
Food Group	96,097	94,131	9,546	9,340	2.1	-7.4	-11.7
Apparel	21,465	19,582	2,159	1,991	9.6	-0.9	-6.6
General Merchandise Group	56,786	57,909	5,607	5,246	-1.9	-11.7	-7.6
Furniture & Appliances	9,884	8,656	913	998	14.2	11.6	30.1
Lumber & Building Materials	10,364	9,716	1,282	1,349	6.7	8.6	10.6
Auto Dealers	46,387	56,295	4,421	4,656	-17.6	-7.4	-5.7
Service Stations	22,393	20,784	2,373	2,207	7.7	1.9	-9.4
All Other	15,045	16,168	1,096	1,755	-6.9	-10.1	9.9
Total	278,421	283,241	27,397	27,542	-1.7	-6.0	-6.1
STATE[a]							
Durable Goods	4,288,763	4,942,539	416,603	429,019	-13.2	-4.6	-2.9
Auto Dealers	2,788,183	3,381,822	267,830	280,000	-17.6	-7.2	-5.7
Accessory Dealers	319,283	307,281	33,295	32,549	3.9	1.4	1.8
Total Automotive	3,107,466	3,689,103	301,125	312,549	-15.8	-6.3	-4.9
Furniture	374,582	333,592	36,522	36,305	12.3	4.8	5.8
Household Appliances	220,175	240,574	22,150	22,382	-8.5	-0.7	1.1
Total Furniture and Appliances	594,757	574,166	58,672	58,687	3.6	2.6	3.9
Lumber and Building Materials	471,983	480,127	49,942	52,988	-1.7	1.7	2.9
Hardware Stores	58,149	55,764	5,995	5,598	4.3	0.4	-0.6
Total Lumber, Building Materials & Hardware	530,132	535,891	55,937	58,586	-1.1	1.6	2.5
Nondurable Goods	9,480,640	9,074,054	961,150	932,213	4.5	-1.9	-1.3
Apparel	712,549	707,268	74,944	69,671	0.7	0.3	-1.7
Drug Stores	364,703	347,570	35,947	36,375	4.9	-1.2	5.2
Eating and Drinking Places	1,421,649	1,339,232	146,174	151,219	6.2	0.5	5.4
Food Group	3,079,758	2,966,270	305,873	297,765	3.8	-1.9	-2.6
Service Stations	1,026,852	954,142	107,664	101,185	7.6	1.7	-9.4
General Merchandise Group	2,281,953	2,136,351	230,157	213,520	6.8	-5.7	-0.6
Total Retail Trade	13,769,403	14,016,593	1,377,753	1,361,232	-1.8	-2.7	-1.8

[a] Total includes data for categories not shown in the table.

ENID AND LAWTON MSAs
MUSKOGEE MA

Category	10 Mos. '89	10 Mos. '88	Oct. '89	Percentage Change 10 Mos. '89/'88	Percentage Change Oct./Sept '89
ENID MSA					
Employment (Number)					
Labor Force[a]	28,155	28,872	27,675	-2.5	-0.5
Total Employment	25,808	27,188	26,525	-5.1	-0.5
Unemployment Rate (%)	4.8	5.8	4.2	—	—
Wage and Salary Employment	21,220	21,500	21,300	-1.3	0.5
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	978	785	200	24.6	42.8
Number of Units	9	8	2	12.5	100.0
Residential—Multi Family					
Dollar Value ($000)	300	0	0	—	0.0
Number of Units	6	0	0	—	0.0
Nonresidential					
Commercial ($000)	4,878	818	3,450	496.3	E
Industrial ($000)	159	0	0	—	0.0
Institutional ($000)	0	300	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	5,358	2,692	0	99.0	0.0
All Other Nonbuilding ($000)	357	152	35	134.9	-80.6
Total Construction ($000)	12,029	4,748	3,684	153.3	E
LAWTON MSA					
Employment (Number)					
Labor Force[a]	48,950	49,038	49,425	-0.2	1.1
Total Employment	46,555	46,145	47,125	0.9	1.1
Unemployment Rate (%)	4.9	5.9	4.7	—	—
Wage & Salary Employment	34,050	33,670	34,700	1.1	1.8
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	5,700	10,982	723	-48.1	528.7
Number of Units	57	141	6	-59.6	500.0
Residential—Multi Family					
Dollar Value ($000)	0	180	0	—	0.0
Number of Units	0	6	0	—	0.0
Nonresidential					
Commercial ($000)	1,777	4,162	0	-57.3	0.0
Industrial ($000)	191	830	0	-77.0	0.0
Institutional ($000)	0	1,390	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	2,392	7,962	0	-70.0	—
All Other Nonbuilding ($000)	38	0	0	—	0.0
Total Construction ($000)	10,096	25,505	723	-60.4	-41.0
MUSKOGEE MA					
Employment (Number)					
Labor Force[a]	31,592	32,070	30,750	-1.5	-0.7
Total Employment	29,362	28,960	29,075	1.4	-0.3
Unemployment Rate (%)	7.1	9.7	5.4	—	—
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	3,244	216	284	E	-13.7
Number of Units	49	2	4	E	-20.0
Residential—Multi Family					
Dollar Value ($000)	2,102	0	2,000	—	E
Number of Units	84	0	80	—	E
Nonresidential					
Commercial ($000)	1,121	400	38	180.2	-80.2
Industrial ($000)	0	0	0	0.0	0.0
Institutional ($000)	277	0	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	1,098	3,160	0	-65.3	—
All Other Nonbuilding ($000)	0	4	0	—	0.0
Total Construction ($000)	7,842	3,780	2,322	107.5	209.6

Note: Includes revisions. [a]Civilian Labor Force. E = Exceeds 600 percent.

Sources for all tables: Local utilities companies; 10th Federal Reserve Bank; Federal Home Loan Bank of Topeka; Oklahoma Employment Security Commission; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by Marjorie E. Earley, Statistician for CEMR and Brian M. Hickey, Research Assistant.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. January 1990.

The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73069. January 1990, volume 58, number 1, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma 73070. Subscription price per year is $10.00 Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

EQUAL OPPORTUNITY STATEMENT

This institution in compliance with Title VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and other Federal laws and regulations does not discriminate on the basis of race, color, or national origin, sex, age, religion, handicap, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Center for Economic and Management Research
University of Oklahoma
Norman, Oklahoma 73019-0450

OKLAHOMA CITY AND TULSA MSAs

				Percentage Change	
Category	10 Mos. '89	10 Mos. '88	Oct. '89	10 Mos. '89/'88	Oct./Sept. '89
OKLAHOMA CITY MSA					
Employment (Number)					
Labor Force[a]	492,510	489,680	491,200	0.6	0.2
Total Employment	468,720	470,150	470,300	-0.3	0.6
Unemployment Rate (%)	5.0	5.7	4.8	—	—
Wage and Salary Employment	406,680	407,620	410,800	-0.2	0.6
Mortgage Loans Closed ($000,000)[b]	68	77	4	-11.6	-48.2
Bank Deposits ($000,000)[c]					
Demand Deposits	802	821	842	-2.3	8.4
Time and Savings Deposits	1,154	1,143	1,132	1.0	1.0
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	143,806	94,640	15,306	47.6	26.8
Number of Units	1,660	1,367	173	21.4	22.7
Residential—Multi Family					
Dollar Value ($000)	21,816	1,374	0	E	0.0
Number of Units	504	75	0	572.0	0.0
Nonresidential					
Commercial ($000)	58,186	64,083	2,314	-9.2	-90.7
Industrial ($000)	4,288	5,469	125	-21.6	-70.6
Institutional ($000)	62,858	18,618	4,800	237.6	224.5
Nonbuilding					
Streets and Highways ($000)	29,651	64,534	6,646	-54.1	184.9
All Other Nonbuilding ($000)	1,766	1,967	59	-11.2	-97.0
Total Construction ($000)	322,372	253,508	29,251	27.2	-29.0
General Business Index	94.5	92.4	92.8	2.2	-1.4
TULSA MSA					
Employment (Number)					
Labor Force[a]	343,900	341,940	345,700	0.6	-0.1
Total Employment	323,180	316,040	328,200	2.2	0.2
Unemployment Rate (%)	6.1	7.6	6.0	—	—
Wage and Salary Employment	301,030	296,090	306,500	1.7	0.6
Mortgage Loans Closed ($000,000)[b]	140	188	18	-25.5	-13.7
Bank Deposits ($000,000)[c]					
Demand Deposits	924	880	940	5.0	6.0
Time and Savings Deposits	2,057	2,169	2,027	-5.2	4.6
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	121,168	91,565	12,799	32.3	15.2
Number of Units	1,532	1,211	158	26.5	17.9
Residential—Multi Family					
Dollar Value ($000)	1,022	1,378	788	-25.8	418.4
Number of Units	32	58	24	-44.8	500.0
Nonresidential					
Commercial ($000)	23,051	56,931	4,078	-59.5	529.3
Industrial ($000)	16,183	15,471	552	4.6	-64.8
Institutional ($000)	15,063	15,019	2,065	0.3	37.8
Nonbuilding					
Streets and Highways ($000)	34,502	33,639	713	2.6	-85.2
All Other Nonbuilding ($000)	3,183	3,223	186	-1.2	-26.2
Total Construction ($000)	214,173	217,225	21,180	-1.4	5.6
General Business Index	93.3	88.4	96.1	5.5	2.3

Note: Includes revisions.

E = Exceeds 600 percent.

[a] Civilian Labor Force.

[b] By Savings and Loan Associations. 8 months and September data.

[c] Total deposits of large commercial banks (accounted for 35 percent of all commercial bank deposits as of December 31, 1988 for Oklahoma City and 54 percent of all commercial bank deposits as of December 31, 1988 for Tulsa).

CONSTRUCTION, STATE

				Percentage Change	
Category	10 Mos. '89	10 Mos. '88	Oct. '89	10 Mos. '89/'88	Oct./Sept. '89
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	293,259	221,935	29,615	32.1	16.8
Number of Units	3,532	2,992	349	18.0	14.8
Residential—Multi Family					
Dollar Value ($000)	25,590	5,651	2,878	352.8	E
Number of Units	634	277	106	128.9	E
Nonresidential					
Commercial ($000)	103,366	138,180	10,083	-25.2	-61.1
Industrial ($000)	22,169	29,766	711	-25.5	-65.5
Institutional ($000)	87,309	39,271	7,085	122.3	50.6
Nonbuilding					
Streets and Highways ($000)	220,697	242,736	8,309	-9.1	-26.9
All Other Nonbuilding ($000)	5,629	5,617	284	0.2	-46.6
Total Construction ($000)	758,019	683,156	58,966	11.0	-16.1

Note: Includes revisions. E = Exceeds 600 percent.

U8130-1 0

OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF OKLAHOMA

CONGRESSIONAL INFO. SERVICE/SRI
ATTN: ROBERTA B. MASON
4520 EAST-WEST HIGHWAY
BETHESDA MD 20814

ISSN 0030-1671

February 1990

VOL. 58, ISSUE 2

SUMMARY OF INDICATORS

Category	11 Mos. '89	11 Mos. '88	Nov. '89	Percentage Change 11 Mos. '89/'88	Percentage Change Nov./Oct. '89
Personal Income (Monthly Average)					
Unadjusted ($000,000)	3,821	3,588	3,936	6.5	0.8
Adjusted for CPI ($000,000)	3,086	3,041	3,126	1.5	0.6
Crude Oil Production (000 bbl)[a]	90,675	99,630	8,870	-9.0	1.5
Natural Gas Production (000 mcf)[a]	1,739,731	1,769,910	151,054	-1.7	-9.2
Industrial Power Sales (000,000 Kwh)[b]	8,112	7,845	741	3.4	-0.8
Total Bank Deposits (Monthly Average) ($000,000)[c]					
Demand	7,399	7,551	7,349	-2.0	-0.5
Savings	23,436	24,403	23,049	-4.0	-0.1
Savings and Loan Associations ($000,000)					
Assets	10,525	10,529	10,009	-0.1	-0.9
Mortgage Loans Closed	457	586	38	-22.0	-7.3
Employment					
Total Labor Force (000)[d]	1,527.1	1,533.4	1,525.9	-0.4	0.4
Total Employment (000)	1,440.2	1,429.9	1,455.3	0.7	0.6
Unemployment Rate (%)	5.7	6.7	4.6	—	—
Wage and Salary Employment (000)	1,139.3	1,131.6	1,153.2	0.7	0.4
General Business Index	96.6	94.7	97.8	2.0	-0.1

Note: Includes revisions. It should be noted that Total Labor Force, Total Employment and Unemployment Rate are calculated by place of residence whereas Wage and Salary (or nonagricultural) Employment is calculated by place of work.

[a] Natural Gas includes casinghead gas. October and 10 months data.

[b] Sales of larger privately owned utility companies.

[c] Total deposits of all depository institutions.

[d] Civilian Labor Force.

RETAIL TRADE IN SELECTED CITIES
($000)

City	Nov. '89 Adjusted	Nov. '89 Unadjusted	Adjusted '89/'88 11 Mos.	Adjusted 1989 Nov./Oct.
Ada	12,166	11,657	-1.6	2.2
Altus	11,262	10,780	-5.4	-0.4
Alva	3,428	3,303	-6.7	-3.5
Anadarko	3,824	3,674	-4.7	-0.3
Ardmore	17,294	16,458	-3.9	-0.8
Bartlesville	24,931	24,621	0.6	-0.2
Blackwell	2,889	2,689	-5.3	4.4
Broken Arrow	25,649	24,320	-1.6	-2.3
Chickasha	9,700	9,279	-5.9	-0.5
Clinton	6,359	6,079	-6.4	5.4
Cushing	4,357	4,306	-7.4	-3.7
Del City	8,873	8,234	-5.1	-1.4
Duncan	15,626	14,948	-8.9	-6.9
Durant	9,431	8,649	-4.5	0.2
Edmond	23,909	24,249	2.9	-0.2
Elk City	7,611	7,318	-3.5	1.9
El Reno	7,987	7,814	-2.8	-4.1
Guthrie	5,638	5,465	-5.9	1.3
Guymon	5,102	4,806	-0.4	4.2
Henryetta	3,316	3,359	-5.0	-5.4
Hobart	2,413	2,354	-6.3	6.1
Holdenville	2,268	2,178	-7.6	6.7
Hugo	4,227	3,836	-4.0	3.5
Idabel	5,444	5,217	-0.9	1.9
Lawton	38,662	37,687	-7.5	-0.1
McAlester	12,811	11,827	-4.6	-1.1
Miami	10,326	9,935	-4.3	3.0
Midwest City	42,732	41,573	-4.4	-6.8
Moore	15,179	14,840	-9.2	-0.6
Muskogee	24,692	23,890	-2.0	1.8
Norman	45,616	42,921	-4.8	-4.0
Oklahoma City	246,913	252,807	-4.1	-4.1
Okmulgee	5,278	5,173	-4.7	-2.7
Pauls Valley	5,218	4,957	-5.8	3.1
Pawhuska	1,738	1,670	-3.7	-5.1
Ponca City	18,513	17,903	3.4	0.6
Poteau	6,128	5,866	-4.7	-3.1
Sand Springs	8,906	8,658	0.4	-3.1
Sapulpa	8,791	8,486	-3.1	2.5
Seminole	4,233	4,044	-6.9	-3.2
Shawnee	21,760	22,228	4.7	-0.3
Stillwater	17,419	17,351	-1.6	-0.6
Tahlequah	8,074	7,720	-0.4	-0.6
Tulsa	271,118	263,600	-1.2	-1.6
Watonga	1,047	1,037	-3.4	-25.9
Weatherford	6,912	6,502	-1.9	3.4
Wewoka	1,376	1,260	-8.0	3.4
Woodward	10,713	10,554	-4.3	1.9
Total	1,057,859	1,038,082	-3.0	-2.0

RETAIL TRADE IN METRO AREAS AND STATE
($000)

					Percentage Change		
	11 Mos. '89	11 Mos. '88	Nov. '89		11 Mos. '89/'88	Nov./Oct. '89	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	1,821,727	1,686,514	175,421	187,349	8.0	5.6	16.5
Apparel	313,144	302,193	29,363	30,283	3.6	-5.2	8.0
General Merchandise Group	1,066,794	1,092,298	90,982	96,736	-2.3	-3.1	16.2
Furniture & Appliances	265,543	248,209	23,541	26,902	7.0	11.7	37.1
Lumber & Building Materials	176,224	195,245	18,350	17,142	-9.7	3.9	-8.8
Auto Dealers	1,276,822	1,546,485	104,570	90,859	-17.4	-6.8	-24.0
Service Stations	387,430	358,380	36,460	34,262	8.1	-2.0	-0.8
All Other	414,468	369,967	48,351	41,241	12.0	10.3	-10.6
Total	5,722,152	5,799,291	527,038	524,774	-1.3	0.8	2.7
TULSA MSA							
Food Group	1,339,921	1,274,734	122,040	114,791	5.1	-0.2	-5.5
Apparel	214,714	217,683	20,608	20,516	-1.4	-0.1	8.6
General Merchandise Group	836,076	791,865	77,999	84,006	5.6	-2.1	13.4
Furniture & Appliances	205,005	195,842	20,407	18,750	4.7	-10.5	-11.0
Lumber & Building Materials	169,900	158,304	17,276	17,084	7.0	-3.3	-7.7
Auto Dealers	800,514	970,044	65,353	57,042	-17.5	-7.6	-24.0
Service Stations	237,949	219,992	22,527	20,994	8.2	1.3	-0.8
All Other	226,243	222,708	23,626	22,019	1.6	-0.3	1.6
Total	4,030,322	4,051,672	369,836	355,202	-0.5	-2.7	-4.5
ENID MSA							
Food Group	98,206	92,672	8,223	8,006	6.0	-3.9	-8.4
Apparel	18,319	17,907	1,707	1,668	2.3	-2.9	3.9
General Merchandise Group	81,933	80,189	7,955	8,335	2.2	0.1	13.0
Furniture & Appliances	13,134	13,020	971	962	0.9	-54.5	-54.3
Lumber & Building Materials	11,331	10,130	1,052	1,125	11.9	-7.4	-16.0
Auto Dealers	56,976	68,919	4,613	4,040	-17.3	-6.3	-24.0
Service Stations	22,257	20,566	2,071	1,965	8.2	-0.8	-0.8
All Other	20,097	20,113	1,959	1,454	-0.1	36.9	-6.3
Total	322,253	323,516	28,551	27,555	-0.4	-4.8	-8.2
LAWTON MSA							
Food Group	135,928	143,814	11,075	10,764	-5.5	11.0	6.6
Apparel	23,134	22,620	2,303	2,182	2.3	6.4	11.4
General Merchandise Group	134,611	137,770	11,721	12,731	-2.3	-5.4	11.2
Furniture & Appliances	22,730	24,858	1,695	1,808	-8.6	-15.1	-2.6
Lumber & Building Materials	20,807	20,783	1,935	1,906	0.1	-3.5	-2.7
Auto Dealers	100,799	122,053	8,191	7,174	-17.4	-7.5	-24.0
Service Stations	33,917	31,390	3,260	3,001	8.1	-3.1	-0.8
All Other	19,419	21,939	567	957	-11.5	-48.4	-6.5
Total	491,345	525,227	40,747	40,523	-6.5	-2.6	-0.7
MUSKOGEE AREA							
Food Group	105,779	101,999	9,580	8,912	3.7	0.8	-4.6
Apparel	23,563	21,771	2,098	2,052	8.2	-2.5	3.1
General Merchandise Group	62,821	64,314	5,983	5,876	-2.3	6.4	12.0
Furniture & Appliances	10,905	9,650	992	998	13.0	5.5	0.0
Lumber & Building Materials	11,755	10,893	1,366	1,189	7.9	6.1	-11.9
Auto Dealers	49,827	60,336	4,043	3,537	-17.4	-6.3	-24.0
Service Stations	24,761	22,873	2,331	2,190	8.3	-2.0	-0.8
All Other	16,970	17,967	2,054	1,604	-5.5	78.1	-9.6
Total	306,381	309,803	28,447	26,358	-1.1	4.0	-4.3
STATE[a]							
Durable Goods	4,706,937	5,351,183	434,114	409,511	-12.0	4.5	-4.5
Auto Dealers	2,993,308	3,623,200	244,339	212,703	-17.4	-6.5	-24.0
Accessory Dealers	352,173	339,737	32,866	30,593	3.7	-1.2	-6.0
Total Automotive	3,345,481	3,962,937	277,205	243,296	-15.6	-5.9	-22.2
Furniture & Appliances	457,575	367,120	81,374	84,583	24.6	128.3	133.0
Household Appliances	243,111	265,480	22,669	22,756	-8.4	1.9	1.7
Total Furniture and Appliances	700,686	632,600	104,043	107,339	10.8	79.7	82.9
Lumber and Building Materials	524,835	531,794	52,029	51,298	-1.3	4.0	-3.2
Hardware Stores	63,938	61,690	5,842	5,489	3.6	-2.3	-1.9
Total Lumber, Building Materials & Hardware	588,773	593,484	57,871	56,787	-0.8	3.3	-3.1
Nondurable Goods	10,432,898	10,018,923	946,806	942,890	4.1	-1.3	1.1
Apparel	788,038	778,486	75,114	76,589	1.2	0.6	9.9
Drug Stores	402,071	386,876	36,824	38,099	3.9	2.2	4.7
Eating and Drinking Places	1,568,865	1,474,517	147,429	139,862	6.4	0.8	-7.5
Food Group	3,367,810	3,264,739	290,127	283,859	3.2	-4.6	-4.7
Service Stations	1,136,181	1,051,007	107,330	100,424	8.1	-0.7	-0.8
General Merchandise Group	2,501,960	2,366,430	221,025	242,068	5.7	-3.3	13.4
Total Retail Trade	15,139,835	15,370,106	1,380,920	1,352,401	-1.5	0.5	-0.6

[a] Total includes data for categories not shown in the table.

ENID AND LAWTON MSAs
MUSKOGEE MA

Category	11 Mos. '89	11 Mos. '88	Nov. '89	Percentage Change	
				11 Mos. '89/'88	Nov./Oct. '89
ENID MSA					
Employment (Number)					
Labor Force[a]	28,136	28,814	27,950	-2.4	1.0
Total Employment	25,915	27,166	26,990	-4.6	1.8
Unemployment Rate (%)	4.7	5.7	3.8	—	—
Wage and Salary Employment	21,214	21,482	21,158	-1.2	-0.7
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	1,148	1,205	170	-4.7	-15.0
Number of Units	11	11	2	0.0	0.0
Residential—Multi Family					
Dollar Value ($000)	300	0	0	—	0.0
Number of Units	6	0	0	—	0.0
Nonresidential					
Commercial ($000)	4,942	1,032	64	378.9	-92.1
Industrial ($000)	159	0	0	—	0.0
Institutional ($000)	0	300	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	5,358	2,692	0	99.0	0.0
All Other Nonbuilding ($000)	357	152	0	134.9	—
Total Construction ($000)	12,264	5,381	234	127.9	-93.6
LAWTON MSA					
Employment (Number)					
Labor Force[a]	48,989	48,950	49,375	0.1	-0.1
Total Employment	46,634	46,102	47,425	1.2	0.6
Unemployment Rate (%)	4.8	5.8	3.9	—	—
Wage & Salary Employment	34,135	33,654	34,990	1.4	0.8
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	5,880	11,560	180	-49.1	-75.1
Number of Units	58	147	1	-60.5	-83.3
Residential—Multi Family					
Dollar Value ($000)	0	180	0	—	0.0
Number of Units	0	6	0	—	0.0
Nonresidential					
Commercial ($000)	2,375	4,928	598	-51.8	—
Industrial ($000)	191	830	0	-77.0	0.0
Institutional ($000)	0	1,390	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	2,392	7,962	0	-70.0	—
All Other Nonbuilding ($000)	38	0	0	—	0.0
Total Construction ($000)	10,874	26,850	778	-59.5	7.6
MUSKOGEE MA					
Employment (Number)					
Labor Force[a]	31,525	32,050	30,850	-1.6	0.3
Total Employment	29,357	28,998	29,300	1.2	0.8
Unemployment Rate (%)	6.9	9.5	5.0	—	—
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	3,244	216	0	E	—
Number of Units	49	2	0	E	—
Residential—Multi Family					
Dollar Value ($000)	2,102	0	0	—	—
Number of Units	84	0	0	—	—
Nonresidential					
Commercial ($000)	1,121	400	0	180.2	—
Industrial ($000)	0	0	0	0.0	0.0
Institutional ($000)	277	0	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	1,098	3,847	0	-71.5	0.0
All Other Nonbuilding ($000)	0	4	0	—	0.0
Total Construction ($000)	7,842	4,468	0	75.5	—

Note: Includes revisions. [a] Civilian Labor Force. E = Exceeds 600 percent.

Sources for all tables: Local utilities companies; 10th Federal Reserve Bank; Federal Home Loan Bank of Topeka; Oklahoma Employment Security Commission; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by Marjorie E. Earley, Statistician for CEMR and Brian M. Hickey, Data Analyst.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. February 1990.

The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73069. February 1990, volume 58, number 2, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma 73070. Subscription price per year is $10.00 Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

EQUAL OPPORTUNITY STATEMENT

This institution in compliance with Title VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and other Federal laws and regulations does not discriminate on the basis of race, color, or national origin, sex, age, religion, handicap, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Center for Economic and Management Research
University of Oklahoma
Norman, Oklahoma 73019-0450

OKLAHOMA CITY AND TULSA MSAs

Category	11 Mos. '89	11 Mos. '88	Nov. '89	Percentage Change 11 Mos. '89/'88	Percentage Change Nov./Oct. '89
OKLAHOMA CITY MSA					
Employment (Number)					
Labor Force[a]	492,627	489,945	493,800	0.5	0.5
Total Employment	469,236	470,164	474,400	-0.2	0.9
Unemployment Rate (%)	4.8	5.6	3.9	—	—
Wage and Salary Employment	407,200	407,900	412,400	-0.2	0.4
Mortgage Loans Closed ($000,000)[b]	84	92	6	-8.7	-44.6
Bank Deposits ($000,000)[c]					
Demand Deposits	803	824	807	-2.6	-4.1
Time and Savings Deposits	1,152	1,148	1,134	0.3	0.1
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	157,166	101,373	13,360	55.0	-12.7
Number of Units	1,814	1,407	154	28.9	-10.9
Residential—Multi Family					
Dollar Value ($000)	22,537	1,374	721	E	—
Number of Units	536	75	32	E	—
Nonresidential					
Commercial ($000)	61,511	67,163	3,123	-8.4	24.1
Industrial ($000)	4,324	5,539	35	-21.9	-72.0
Institutional ($000)	58,420	18,618	62	213.8	-79.3
Nonbuilding					
Streets and Highways ($000)	44,000	66,196	14,349	-33.5	115.9
All Other Nonbuilding ($000)	1,928	2,090	117	-7.8	12.5
Total Construction ($000)	349,885	262,352	31,767	33.4	27.1
General Business Index	94.4	92.8	93.4	1.8	0.6
TULSA MSA					
Employment (Number)					
Labor Force[a]	344,200	341,654	347,000	0.7	0.4
Total Employment	323,791	316,273	329,900	2.4	0.5
Unemployment Rate (%)	5.9	7.4	4.9	—	—
Wage and Salary Employment	301,582	295,700	307,100	2.0	0.2
Mortgage Loans Closed ($000,000)[b]	173	212	17	-18.4	9.7
Bank Deposits ($000,000)[c]					
Demand Deposits	928	884	968	5.0	3.1
Time and Savings Deposits	2,061	2,168	2,096	-4.9	3.4
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	132,002	99,534	10,518	32.6	-19.8
Number of Units	1,675	1,324	137	26.5	-16.5
Residential—Multi Family					
Dollar Value ($000)	1,022	1,378	0	-25.8	—
Number of Units	32	58	0	-44.8	—
Nonresidential					
Commercial ($000)	24,229	57,890	1,178	-58.1	-61.1
Industrial ($000)	17,745	17,138	1,562	3.5	183.0
Institutional ($000)	15,248	19,193	185	-20.6	-91.0
Nonbuilding					
Streets and Highways ($000)	34,502	41,615	0	-17.1	—
All Other Nonbuilding ($000)	3,341	3,455	158	-3.3	-15.1
Total Construction ($000)	228,089	240,203	13,601	-5.0	-36.7
General Business Index	93.5	88.6	95.9	5.6	-0.3

Note: Includes revisions.

E = Exceeds 600 percent.

[a] Civilian Labor Force.

[b] By Savings and Loan Associations.

[c] Total deposits of large commercial banks (accounted for 35 percent of all commercial bank deposits as of December 31, 1988 for Oklahoma City and 54 percent of all commercial bank deposits as of December 31, 1988 for Tulsa).

CONSTRUCTION, STATE

Category	11 Mos. '89	11 Mos. '88	Nov. '89	Percentage Change 11 Mos. '89/'88	Percentage Change Nov./Oct. '89
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	318,877	236,820	25,303	34.6	-15.5
Number of Units	3,845	3,184	307	20.8	-13.5
Residential—Multi Family					
Dollar Value ($000)	26,930	5,651	1,340	376.6	-53.4
Number of Units	698	277	64	152.0	-39.6
Nonresidential					
Commercial ($000)	109,627	145,135	6,060	-24.5	-41.0
Industrial ($000)	23,767	31,503	1,597	-24.6	124.8
Institutional ($000)	83,056	45,186	247	83.8	-90.0
Nonbuilding					
Streets and Highways ($000)	239,143	260,311	18,446	-8.1	122.0
All Other Nonbuilding ($000)	5,962	5,994	289	-0.5	-12.2
Total Construction ($000)	807,362	730,601	53,282	10.5	-3.2

Note: Includes revisions.

U8130-1#

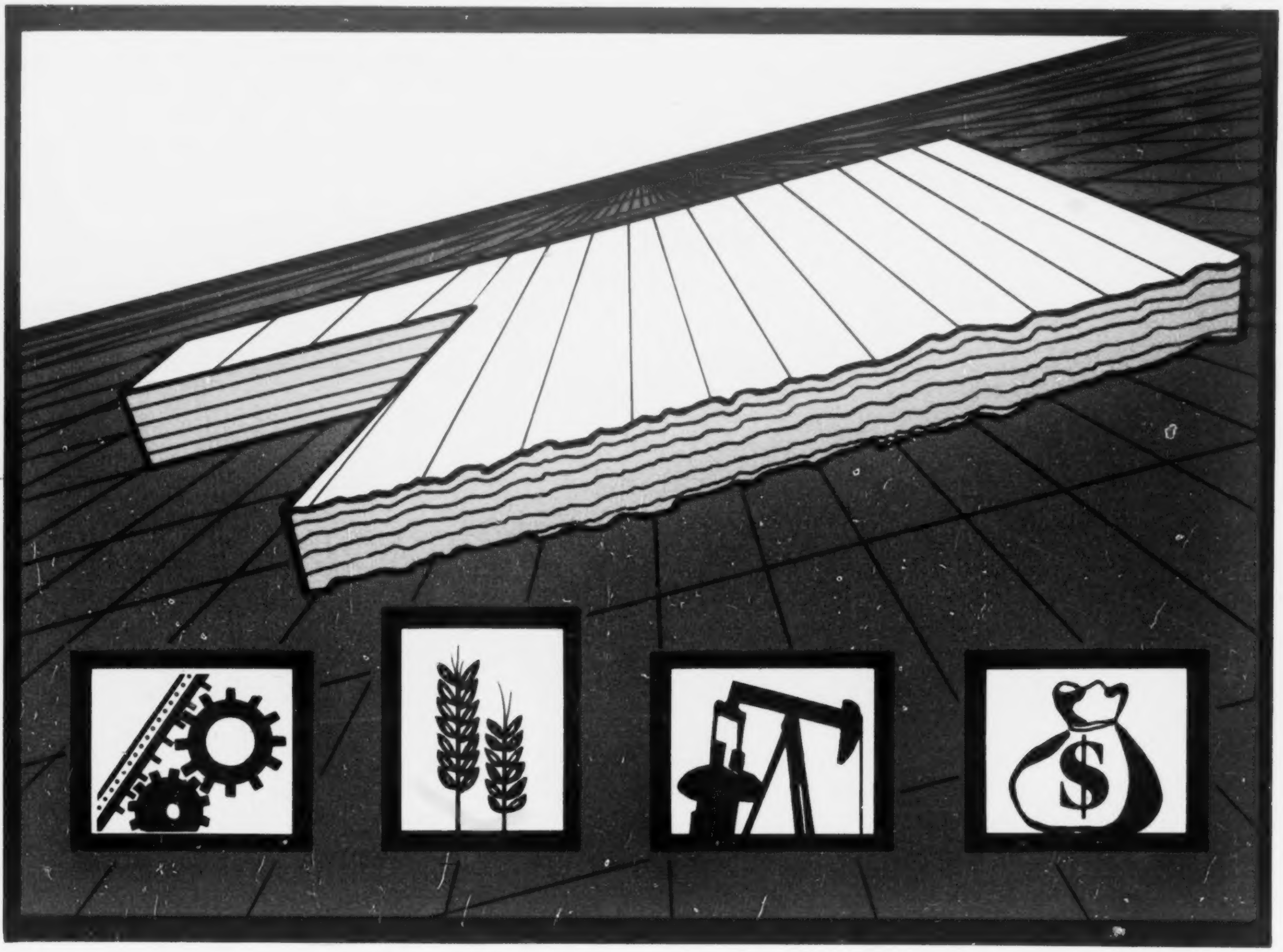
OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF OKLAHOMA

ISSN 0030-1671

March 1990

VOL. 58, ISSUE 3



The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73019-0450. March 1990, volume 58, number 3, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma. Subscription price per year is $10.00. Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

The Editorial Review Board welcomes original manuscripts, studies, and research reports from persons in both the public and private sector in any area of economics and business administration. The editorial policy of the *Bulletin* promotes a free exchange of ideas and analyses. Accordingly, the contents do not necessarily reflect the views of the editor or the publisher.

Manuscripts for consideration should be typed, double-spaced, and submitted in duplicate. Each submitted manuscript is reviewed by at least two members of the Editorial Review Board and a decision is usually reached in four to six weeks.

Address all manuscripts and correspondence to:

Oklahoma Business Bulletin
Center for Economic and Management Research
307 West Brooks, Room 4
Norman, Oklahoma 73019-0450

The *Oklahoma Business Bulletin* is published by the Center for Economic and Management Research, College of Business Administration, The University of Oklahoma.

©1990 by the Center for Economic and Management Research. Printed in the United States of America.

PUBLICATIONS STAFF

Director	NEIL J. DIKEMAN, JR.
Assistant Director	DAVID PENN
Information Specialist	MARJORIE E. EARLEY
Publication Manager	ALICE WATKINS
Publication Assistant	PATRICIA WICKHAM
Graphics	SUSAN CLANCY
Copyreader	MARILYN CAIN
Data Analyst	BRIAN HICKEY

EDITORIAL REVIEW BOARD

CLYDE C. COLE President, Tulsa Chamber of Commerce, Tulsa, Oklahoma.

JAMES A. CONSTANTIN David Ross Boyd Professor Emeritus, College of Business Administration, University of Oklahoma, Norman, Oklahoma.

JAMES E. HIBDON Professor of Economics, University of Oklahoma, Norman, Oklahoma.

H.E. RAINBOLT Chairman of the Board, Federal National Bank & Trust Company, Shawnee, Oklahoma.

ROBERT L. SANDMEYER Dean, College of Business Administration, Oklahoma State University, Stillwater, Oklahoma.

WILLIS J. WHEAT T.K. Hendrick Professor of Marketing/Management, School of Management and Business Sciences, Oklahoma City University.

DANIEL A. WREN Professor of Management, University of Oklahoma, Norman, Oklahoma.

CEM RESEARCH
Center for Economic and Management Research

Table of Contents

TABLES

Summary of Indicators 2
Selected Economic Indicators 2
Retail Trade in Metro Areas and State 3
Retail Trade in Selected Cities 4
Metropolitan Area Data
  Enid and Lawton 5
  Muskogee 5
  Tulsa 6
  Oklahoma City 7

ARTICLES

Business Highlights 8
Neil J. Dikeman, Jr.

An Analysis of Oklahoma's Economy 11
Craig Knutson

Oklahoma Banking
1989 21
Neil J. Dikeman, Jr.

Oklahoma's Gross State Products: 1963-1986 25
Gerald M. Lage
John Shelnutt

Using a Decision Support System
To Manage Exchange Rate Risk 32
Mark G. Simkin
Nancy A. Bagranoff
Peggy J. Crawford

SUMMARY OF INDICATORS

Category	12 Mos. '89	12 Mos. '88	Dec. '89	Percentage Change 12 Mos. '89/'88	Percentage Change Dec./Nov. '89
Personal Income (Monthly Average)					
Unadjusted ($000,000)	3,834	3,599	3,960	6.5	0.4
Adjusted for CPI ($000,000)	3,092	3,044	3,140	1.6	-2.8
Crude Oil Production (000 bbl)[a]	98,771	108,946	7,665	-9.3	-15.6
Natural Gas Production (000 mcf)[a]	1,926,200	1,952,872	139,660	-1.4	-24.1
Industrial Power Sales (000,000 Kwh)[b]	8,876	8,543	763	3.9	3.0
Total Bank Deposits (Monthly Average) ($000,000)[c]					
Demand	7,414	7,556	7,576	-1.9	3.1
Savings	23,406	24,354	23,090	-3.9	0.2
Savings and Loan Associations ($000,000)					
Assets	10,424	10,572	93.2	-1.4	-7.0
Mortgage Loans Closed	494	640	37	-22.8	-3.8

Note: Includes revisions.

[a] Eleven months and November data. Natural gas includes casinghead gas.

[b] Sales of larger privately owned utility companies.

[c] Total deposits of all depository institutions.

SELECTED ECONOMIC INDICATORS

Category	12 Mos. '89	12 Mos. '88	Dec. '89	Percentage Change 12 Mos. '89/'88	Percentage Change Dec./Nov. '89
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	335,870	297,388	16,873	12.9	-33.6
Number of Units	4,050	4,074	203	-0.6	-34.3
Residential—Multi Family					
Dollar Value ($000)	27,398	11,650	469	135.2	-65.0
Number of Units	712	562	14	26.7	-78.1
Nonresidential					
Commercial ($000)	111,576	167,026	1,994	-33.2	-66.8
Industrial ($000)	24,668	37,116	851	-33.5	-48.3
Institutional ($000)	84,693	53,792	1,637	57.4	562.8
Nonbuilding					
Streets and Highways ($000)	263,110	280,383	23,967	-6.2	29.9
All Other Nonbuilding ($000)	6,166	6,275	181	-1.7	-42.0
Total Construction ($000)	853,481	853,630	45,971	0.0	-14.0
EMPLOYMENT TRENDS[a]					
Total Labor Force (000)[b]	1,526.4	1,533.0	1,518.9	-0.4	-0.4
Total Employment (000)	1,440.3	1,431.0	1,440.8	0.6	-1.0
Unemployment Rate (%)	5.6	6.6	5.1	—	—
Wage and Salary Employment (000)	1,140.6	1,132.7	1,154.3	0.7	0.1
Manufacturing (000)	164.2	162.8	165.5	0.8	-0.1
Mining (000)	44.1	44.9	45.6	-1.8	1.6
Government (000)	248.0	247.5	250.0	0.2	0.2
Contract Construction (000)	34.1	34.4	34.0	-0.9	-3.4
Services (000)	253.0	248.0	255.6	2.0	-1.0
Retail Trade (000)	218.3	215.0	224.0	1.5	1.7
Average Weekly Hours (Per Worker)					
Manufacturing	41.6	41.1	43.0	1.2	1.4
Average Weekly Earnings ($ Per Worker)					
Manufacturing	440.46	425.34	452.36	3.6	1.5
Contract Construction	426.14	428.70	406.20	-0.6	-11.4
Retail Trade[c]	191.98	190.92	188.97	0.6	-0.6

Note: Includes revisions in some previous months. All December 1989 Employment data is preliminary.

[a] Preliminary

[b] Civilian Labor Force. Labor Force employment and unemployment rate refer to place of residence, non-agricultural wage and salary employment refers to place of work.

[c] Excluding eating and drinking places.

RETAIL TRADE IN METRO AREAS AND STATE
($000)

					Percentage Change		
	12 Mos. '89	12 Mos. '88	Dec. '89		12 Mos. '89/'88	Dec./Nov. '89	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	1,967,667	1,849,573	145,589	151,397	6.4	-19.8	-19.2
Apparel Group	342,323	331,453	28,217	50,221	3.3	-3.7	65.8
General Merchandise Group	1,169,906	1,207,292	96,767	174,028	-3.1	5.0	79.9
Furniture Group	288,970	286,580	22,791	29,980	0.8	-5.6	11.4
Lumber Group	192,934	214,391	17,020	13,748	-10.0	-6.7	-19.8
Auto Dealers	1,354,685	1,682,671	81,211	76,668	-19.5	-19.4	-15.6
Gasoline	421,457	396,210	34,470	32,080	6.4	-5.0	-6.4
All Other	458,731	394,615	56,029	54,175	16.2	36.7	31.4
Total	6,196,673	6,362,785	482,094	582,297	-2.6	-7.9	11.0
TULSA MSA							
Food Group	1,471,381	1,395,847	129,899	140,653	5.4	5.8	22.5
Apparel Group	236,216	239,526	21,314	36,575	-1.4	3.1	70.1
General Merchandise Group	925,456	878,080	86,018	150,505	5.4	8.7	79.2
Furniture Group	219,015	215,314	17,357	21,484	1.7	-7.9	14.6
Lumber Group	185,147	175,302	15,393	13,720	5.6	-9.2	-19.7
Auto Dealers	850,158	1,056,402	51,497	48,133	-19.5	-18.2	-15.6
Gasoline	258,423	242,940	21,537	19,657	6.4	-2.9	-6.4
All Other	254,755	253,923	27,168	17,972	0.3	8.2	-14.5
Total	4,400,551	4,457,334	370,183	448,699	-1.3	0.4	26.3
ENID MSA							
Food Group	106,844	101,456	8,568	9,363	5.3	4.0	16.9
Apparel Group	19,933	19,624	1,654	2,396	1.6	-2.0	43.6
General Merchandise Group	90,207	88,630	8,204	14,644	1.8	3.0	75.7
Furniture Group	14,289	15,607	1,105	1,348	-8.4	11.3	40.1
Lumber Group	12,255	11,351	1,021	795	8.0	-1.0	-29.3
Auto Dealers	60, 312	74,864	3,655	3,409	-19.4	-17.0	-15.6
Gasoline	24,181	22,717	1,993	1,840	6.4	-3.8	-6.4
All Other	22,675	21,789	2,549	1,691	4.1	28.7	16.3
Total	350,696	356,038	28,749	35,486	-1.5	1.4	28.8
LAWTON MSA							
Food Group	147,000	157,324	11,016	11,353	-6.6	-1.5	5.5
Apparel Group	25,336	24,766	2,236	3,597	2.3	-2.6	64.8
General Merchandise Group	147,179	150,156	12,660	22,631	-2.0	7.8	77.8
Furniture Group	24,559	27,155	1,856	2,182	-9.6	10.0	20.7
Lumber Group	22,653	22,840	1,860	1,374	-0.8	-3.3	-27.9
Auto Dealers	106,991	132,850	6,444	6,053	-19.5	-18.6	-15.6
Gasoline	36,965	34,781	3,096	2,810	6.3	-4.6	-6.4
All Other	20,305	23,400	180	255	-13.2	-68.6	-73.4
Total	530,988	573,272	39,348	50,255	-7.4	-3.0	24.0
MUSKOGEE AREA							
Food Group	116,379	111,940	10,381	10,892	4.0	7.1	22.2
Apparel Group	25,596	24,229	2,039	3,265	5.6	-2.5	59.1
General Merchandise Group	69,928	70,690	6,746	12,879	-1.1	10.6	119.2
Furniture Group	11,775	11,107	864	1,100	6.0	-12.6	10.2
Lumber Group	13,166	12,010	1,395	1,042	9.6	1.6	-12.4
Auto Dealers	52,790	65,532	3,113	2,984	-19.4	-20.5	-15.6
Gasoline	26,935	25,287	2,203	2,050	6.5	-5.0	-6.4
All Other	19,750	19,882	2,078	2,110	-0.7	-3.8	31.5
Total	336,319	340,677	28,819	36,322	-1.3	0.6	37.8
STATE[a]							
Durable Goods	5,041,920	5,832,661	341,276	343,169	-13.6	-18.1	-16.2
Auto Dealers	3,173,610	3,939,059	189,075	179,481	-19.4	-19.9	-15.6
Accessory Dealers	384,793	370,206	32,706	31,964	3.9	-0.4	4.5
Total Automotive	3,558,403	4,309,265	221,781	211,445	-17.4	-17.5	-13.1
Furniture	494,712	407,672	37,411	42,274	21.4	-54.9	-50.0
Household Appliances	266,445	291,867	23,265	28,741	-8.7	2.9	26.3
Total Furniture and Appliances	761,157	699,539	60,676	71,015	8.8	-42.6	-33.8
Lumber and Building Materials	566,163	582,747	42,049	36,663	-2.8	-18.0	-28.5
Hardware Stores	69,888	67,912	5,917	6,626	2.9	1.4	20.7
Total Lumber, Building Materials & Hardware	636,051	650,659	47,966	43,289	-2.2	-16.1	-23.8
Nondurable Goods	11,568,208	11,014,087	1,082,970	1,362,696	5.0	13.7	44.5
Apparel	872,227	859,258	81,213	135,134	1.5	7.0	76.4
Drug Stores	440,878	423,685	37,837	50,996	4.1	1.8	33.9
Eating and Drinking Places	1,725,712	1,621,829	150,786	151,624	6.4	1.5	8.4
Food Group	3,694,665	3,565,291	321,886	354,114	3.6	10.9	24.7
Gasoline	1,235,405	1,161,118	100,668	94,027	6.4	-5.0	-6.4
General Merchandise Group	2,776,001	2,595,314	272,385	486,871	7.0	24.6	101.1
Total Retail Trade	16,610,128	16,846,748	1,424,246	1,705,865	-1.4	4.0	26.1

[a] Total includes data for categories not shown in the table.

RETAIL TRADE IN SELECTED CITIES
($000)

					Percentage Change		
	12 Mos. '89	12 Mos. '88	Dec. '89		12 Mos. '89/'88	Dec./Nov. '89	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
Ada	144,964	148,263	11,729	14,740	-2.2	-3.2	26.4
Altus	140,523	150,100	10,543	12,290	-6.4	-5.6	14.0
Alva	42,099	45,276	3,403	3,822	-7.0	-0.9	15.7
Anadarko	46,704	49,525	3,598	4,328	-5.7	-4.8	17.8
Ardmore	209,537	219,287	16,756	20,862	-4.4	-2.9	26.8
Bartlesville	291,724	289,537	26,826	31,580	0.8	6.9	28.3
Blackwell	33,926	36,150	2,568	2,905	-6.2	-8.4	8.0
Broken Arrow	303,764	311,617	25,360	27,054	-2.5	-0.8	11.2
Chickasha	117,047	124,505	9,750	10,960	-6.0	0.2	18.1
Clinton	75,573	81,069	6,194	6,751	-6.8	-1.6	11.1
Cushing	53,490	57,857	4,294	5,113	-7.5	-0.8	18.7
Del City	106,623	113,632	8,375	8,534	-6.2	-4.8	3.6
Duncan	190,008	208,348	16,093	18,238	-8.8	3.0	22.0
Durant	106,911	111,867	8,754	10,474	-4.4	-6.4	21.1
Edmond	277,887	272,637	21,349	23,981	1.9	-8.0	-1.1
Elk City	90,184	94,178	7,360	8,394	-4.2	-3.1	14.7
El Reno	101,294	105,713	8,212	8,678	-4.2	3.2	11.1
Guthrie	67,007	72,258	4,955	5,010	-7.3	-8.0	-8.3
Guymon	59,770	61,380	4,327	4,983	-2.6	-14.1	3.7
Henryetta	41,908	44,271	3,347	3,926	-5.3	1.1	16.9
Hobart	29,143	31,572	2,325	2,427	-7.7	-3.4	3.1
Holdenville	26,348	28,655	2,100	2,398	-8.1	-5.5	10.1
Hugo	46,041	47,740	3,975	4,486	-3.6	-5.4	16.9
Idabel	62,906	63,890	5,437	5,935	-1.5	0.1	13.8
Lawton	494,781	539,486	37,333	46,957	-8.3	-2.8	24.6
McAlester	147,829	155,701	12,032	13,494	-5.1	-5.1	14.1
Miami	120,352	127,338	8,313	10,686	-5.5	-19.0	7.6
Midwest City	531,640	561,367	44,475	54,837	-5.3	4.1	31.9
Moore	183,941	205,202	15,050	16,210	-10.4	-0.7	9.2
Muskogee	310,207	315,904	26,862	33,394	-1.8	5.6	39.8
Norman	581,657	610,974	47,019	56,132	-4.8	2.7	30.8
Oklahoma City	3,133,292	3,277,331	259,701	329,178	-4.4	4.6	30.2
Okmulgee	63,923	67,652	5,304	5,546	-5.5	1.6	7.2
Pauls Valley	60,792	64,788	5,194	5,616	-6.2	-1.0	13.3
Pawhuska	21,760	22,595	1,767	2,115	-3.7	2.0	26.6
Ponca City	208,670	204,796	16,582	19,409	1.9	-9.7	8.4
Poteau	72,183	75,255	6,571	7,311	-4.1	6.5	24.6
Sand Springs	110,205	110,399	9,395	11,175	-0.2	5.0	29.1
Sapulpa	107,224	110,831	8,782	10,038	-3.3	-0.2	18.3
Seminole	53,447	58,098	3,933	4,888	-8.0	-5.6	20.9
Shawnee	266,547	254,162	22,100	28,268	4.9	1.3	27.2
Stillwater	213,281	218,496	16,707	19,605	-2.4	-3.8	13.0
Tahlequah	93,516	94,500	7,910	8,433	-1.0	-1.3	9.2
Tulsa	3,224,254	3,273,572	283,496	346,481	-1.5	3.9	31.4
Watonga	17,048	17,378	1,581	1,836	-1.9	51.6	77.0
Weatherford	82,241	85,173	6,721	6,970	-3.4	-2.7	7.2
Wewoka	16,431	17,767	1,466	1,486	-7.5	5.5	17.9
Woodward	128,189	135,092	10,235	11,618	-5.1	-2.1	10.1
Total Selected Cities	12,908,791	13,373,184	1,076,159	1,299,552	-3.5	1.6	25.2

Sources for all tables: Local utilities companies; 10th Federal Reserve District Member Banks; Federal Home Loan Bank of Topeka; Oklahoma Employment Security Commission; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, *Progressive Report of the Transportation Director;* Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by Marjorie E. Earley, Statistician for CEMR and Brian Hickey, Research Assistant.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. March 1990.
The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73019. March 1990, volume 58, number 3. Second class postage paid at Norman, Oklahoma 73070. Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

EQUAL OPPORTUNITY STATEMENT

This institution in compliance with Title VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and other Federal laws and regulations does not discriminate on the basis of race, color, or national origin, sex, age, religion, handicap, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

ENID AND LAWTON MSAs

Category	12 Mos. '89	12 Mos. '88	Dec. '89	Percentage Change 12 Mos. '89/'88	 Dec./Nov. '89
ENID MSA					
Employment (Number)[a]					
Labor Force[b]	28,110	28,773	27,825	-1.7	-0.4
Total Employment	26,802	27,156	26,650	-1.3	-0.9
Unemployment Rate (%)	4.6	5.6	4.2	—	—
Wage and Salary Employment	21,292	21,458	21,700	-0.8	0.5
Wholesale and Retail Trade	6,025	6,242	6,200	-3.5	1.6
Manufacturing	1,500	1,542	1,400	-2.7	0.0
Industrial Power Sales (000 Kwh)	440,261	460,854	26,042	-4.5	-28.1
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	1,288	1,205	140	6.9	-17.6
Number of Units	12	11	1	9.1	-50.0
Residential—Multi Family					
Dollar Value ($000)	300	0	0	—	0.0
Number of Units	6	0	0	—	0.0
Nonresidential					
Commercial ($000)	4,944	1,052	2	370.1	-96.9
Industrial ($000)	159	0	0	—	0.0
Institutional ($000)	0	300	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	5,358	2,692	0	99.0	0.0
All Other Nonbuilding ($000)	362	152	5	138.2	—
Total Construction ($000)	12,411	5,401	147	129.8	-37.2
LAWTON MSA					
Employment (Number)[a]					
Labor Force[b]	48,996	48,925	49,075	0.1	-0.6
Total Employment	46,667	46,117	47,025	1.2	-0.8
Unemployment Rate (%)	4.8	5.7	4.2	—	—
Wage and Salary Employment	34,200	33,650	35,000	1.6	0.3
Industrial Power Sales (000 Kwh)	208,763	200,704	17,307	4.0	-5.7
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	6,055	12,276	175	-50.7	-2.7
Number of Units	59	160	1	-63.1	0.0
Residential—Multi Family					
Dollar Value ($000)	0	180	0	—	0.0
Number of Units	0	6	0	—	0.0
Nonresidential					
Commercial ($000)	2,375	5,149	0	-53.9	—
Industrial ($000)	191	830	0	-77.0	0.0
Institutional ($000)	0	4,390	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	2,392	7,962	0	-70.0	0.0
All Other Nonbuilding ($000)	38	4	0	E	0.0
Total Construction ($000)	11,049	30,790	175	-64.1	-77.5

Note: Includes revisions. [a]Preliminary. [b]Civilian Labor Force. E = Exceeds 600 percent.

MUSKOGEE MA

Category	12 Mos. '89	12 Mos. '88	Dec. '89	Percentage Change 12 Mos. '89/'88	 Dec./Nov. '89
Employment (Number)[a]					
Labor Force[b]	31,467	32,046	30,825	-1.8	-0.1
Total Employment	29,329	29,038	29,025	1.0	-0.9
Unemployment Rate (%)	6.8	9.4	5.8	—	—
Industrial Power Sales (000 Kwh)	174,767	172,966	15,140	1.0	-1.7
Port of Muskogee					
Tons in	125,399	81,945	10,516	53.0	16.0
Tons out	85,978	41,830	7,613	105.5	-43.2
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	3,244	1,289	0	151.7	0.0
Number of Units	49	24	0	104.2	0.0
Residential—Multi Family					
Dollar Value ($000)	2,102	524	0	301.1	0.0
Number of Units	84	24	0	250.0	0.0
Nonresidential					
Commercial ($000)	1,121	408	0	174.8	0.0
Industrial ($000)	0	15	0	—	0.0
Institutional ($000)	277	440	0	-37.0	0.0
Nonbuilding					
Streets and Highways ($000)	1,098	4,181	0	-73.7	0.0
All Other Nonbuilding ($000)	0	5	0	—	0.0
Total Construction ($000)	7,842	6,861	0	14.3	0.0

Note: Includes revisions. [a]Preliminary. [b]Civilian Labor Force.

TULSA MSA

Category	12 Mos. '89	12 Mos. '88	Dec. '89	Percentage Change 12 Mos. '89/'88	Percentage Change Dec./Nov. '89
Employment (Number)[a]					
Labor Force[b]	344,317	341,575	345,600	0.8	-0.4
Total Employment	324,142	316,683	328,000	2.4	-0.6
Unemployment Rate (%)	5.9	7.3	5.0	—	—
Wage and Salary Employment	302,108	294,750	307,900	2.5	0.3
Manufacturing	49,792	49,492	50,900	0.6	1.0
Mining	14,517	14,258	14,400	1.8	-0.7
Government	36,875	36,775	36,700	0.3	-1.1
Wholesale and Retail Trade	71,142	70,600	73,500	0.8	1.9
Average Weekly Earnings					
Manufacturing ($ Per Worker)	448.12	448.72	461.74	-0.1	2.6
Industrial Power Sales (000 Kwh)	2,412,385	2,256,616	206,337	6.9	0.7
Mortgage Loans Closed ($000,000)[c]	188	234	16	-19.5	-9.6
Bank Deposits ($000,000)[d]					
Demand Deposits	937	888	1,033	5.4	6.6
Time and Savings Deposits	2,068	2,164	2,155	-4.4	2.8
Air Transportation					
Passengers Enplaning (Number)	1,438,287	1,375,113	119,204	4.6	-0.5
Passengers Deplaning (Number)	1,467,676	1,395,516	118,317	5.2	-3.0
Freight (Tons)	27,473	22,365	2,330	22.8	-10.4
Water Transportation					
Tulsa Port of Catoosa					
Tons In	656,250	493,805	67,829	32.9	82.8
Tons Out	1,227,401	1,205,227	136,607	1.8	80.2
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	140,245	106,532	8,243	31.6	-21.6
Number of Units	1,776	1,423	101	24.8	-26.3
Residential—Multi Family					
Dollar Value ($000)	1,128	2,550	106	-55.8	—
Number of Units	34	110	2	-69.1	—
Nonresidential					
Commercial ($000)	24,706	59,163	478	-58.2	-59.4
Industrial ($000)	18,532	19,156	787	-3.3	-49.6
Institutional ($000)	15,367	20,343	119	-24.5	-35.7
Nonbuilding					
Streets and Highways ($000)	37,044	49,114	2,541	-24.6	—
All Other Nonbuilding ($000)	3,517	3,561	176	-1.2	11.4
Total Construction	240,539	260,418	12,450	-7.6	-8.5

Note: Includes revisions.

[a] Preliminary

[b] Civilian Labor Force

[c] By Savings and Loan Associations

[d] Deposits of large commercial banks (accounted for 50 percent of all commercial bank deposits as of December 31, 1988).

OKLAHOMA CITY MSA

Category	12 Mos. '89	12 Mos. '88	Dec. '89	Percentage Change 12 Mos. '89/'88	Percentage Change Dec./Nov. '89
Employment (Number)[a]					
Labor Force[b]	492,450	490,517	490,500	0.4	-0.7
Total Employment	469,200	470,408	468,800	-0.3	-1.2
Unemployment Rate (%)	4.8	5.6	4.2	—	—
Wage and Salary Employment	407,592	405,458	411,900	0.5	-0.1
Manufacturing	49,475	48,683	49,500	1.6	-0.8
Mining	10,267	11,783	10,200	-12.9	-1.0
Government	97,558	95,783	100,700	1.8	0.8
Wholesale and Retail Trade	101,375	100,992	102,900	0.4	0.0
Average Weekly Earnings					
Manufacturing ($ Per Worker)	491.78	474.82	501.98	3.6	1.5
Industrial Power Sales (000 Kwh)	1,257,585	1,216,176	104,848	3.4	1.4
Mortgage Loans Closed ($000,000)[c]	91	103	7	-11.8	20.7
Bank Deposits ($000,000)[d]					
Demand Deposits	808	829	859	-2.5	6.5
Time and Savings Deposits	1,151	1,151	1,140	0.0	0.6
Air Transportation					
Passengers Enplaning (Number)	1,555,623	1,509,824	129,689	3.0	-0.2
Passengers Deplaning (Number)	1,571,144	1,520,302	127,045	3.3	-2.7
Freight Enplaned (Tons)	7,719	7,925	770	-2.6	-1.5
Freight Deplaned (Tons)	11,224	10,765	1,347	4.3	7.0
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	165,363	133,631	8,077	23.7	-40.1
Number of Units	1,909	1,875	93	1.8	-40.4
Residential—Multi Family					
Dollar Value ($000)	22,537	1,374	0	E	—
Number of Units	536	75	0	E	—
Nonresidential					
Commercial ($000)	62,819	71,154	1,353	-11.7	-56.0
Industrial ($000)	4,374	5,539	0	-21.0	—
Institutional ($000)	59,835	18,848	1,415	217.5	E
Nonbuilding					
Streets and Highways ($000)	47,230	68,023	3,230	-30.6	-77.5
All Other Nonbuilding ($000)	1,951	2,118	0	-7.9	—
Total Construction ($000)	364,107	300,688	14,075	21.1	-55.9

Note: Includes revisions.

[a] Preliminary.

[b] Civilian Labor Force.

[c] By Savings and Loan Associations.

[d] Deposits of large commercial banks (accounted for 35 percent of all commercial bank deposits as of December 31, 1988).

E = Exceeds 600 percent.

Business Highlights

NEIL J. DIKEMAN, JR.

THE BIG NEWS FOR 1989 IS that Oklahoma's economy continued the modest upturn begun in 1988 which suggests that 1990 may be even a better year economically speaking than 1989. First and of prime importance was the fact that total personal income for the year in terms of current dollars was 6.5 percent ahead of 1988 which meant that after adjustment for inflation, the purchasing power of the average Oklahoma consumer rose approximately 1.6 percent. A part of this increase is attributable to an increase of 0.7 percent (or 7,900 jobs) in wage and salary employment which was accompanied by a similar rise in wage and salary income. Employment gains were noted in all sectors except mining where wage and salary employment declined by 1.8 percent and contract construction which dropped by 0.9 percent. The largest employment gains occurred in the trades and services which together, increased 1.8 percent over their 1988 levels.

The 0.8 percent rise in manufacturing employment during 1989 over 1988 was particularly welcome in that it indicates continuing recovery in manufacturing activity from the low level experienced in 1987. Further indication that the recovery of manufacturing is now underway is provided by the 3.9 percent increase in industrial power sales during the year.

The banking industry which has undergone some difficult times during the past five years also appears to have overcome many of its problems as witnessed by the fact that deposits in banks ~~have risen~~ more than 1 percent and assets have increased by more than 2.8 percent. The increase in bank deposits during 1989 is in direct contrast to deposits in all depository institutions (i.e., banks, thrift institutions and credit unions) which declined 3.4 percent. Oklahoma banks also showed significant improvements in other areas such as in profits where the gains in bank operations pushed the profit level to its highest point in the past six years. In short, it now appears that the banking industry has shaken off most of the problems induced by the collapse of crude oil and natural gas prices.

Retail sales performed very well in the non-durable goods categories where sales of these items rose by 5 percent during the year. Of even more significance is the fact that increases occurred in all non-durable merchandise lines with the sharpest gains occurring in General Merchandise, Service Station and Restaurant sales. In fact, all lines reversed 1988 decreases except General Merchandise stores where a third consecutive annual increase was registered. Much of the rise in non-durable goods sales can be attributed to sharp gains in December which tended generally to be more favorable to sales of non-durable goods than to sales of durable goods. The most notable gain in December was the 101 percent rise in General Merchandise sales. Chart 1 traces monthly non-durable goods sales since 1987.

As has been the experience throughout the year, sales of durable goods lagged behind year ago totals by 13.6 percent due principally to a decline of 19.4 percent automobile sales and 8.7 percent in appliance sales. These losses were partially offset by a large increase in the dollar volume of furniture sales (21.4 percent) and more modest increases in sales of auto accessories and hardware. The only durable goods merchandise lines which experienced sales increases during December were appliance and hardware stores and in both cases these gains were only slightly more than was seasonally expected (See Chart 2).

Considering retail sales during 1989 in total, the sharp decrease in durable goods sales more than offset the increase in non-durable goods sales and as a result, the total was 1.4 percent

CHART 1

Total Nondurable Goods — Oklahoma
by month 1987-1989
($000,000,000)

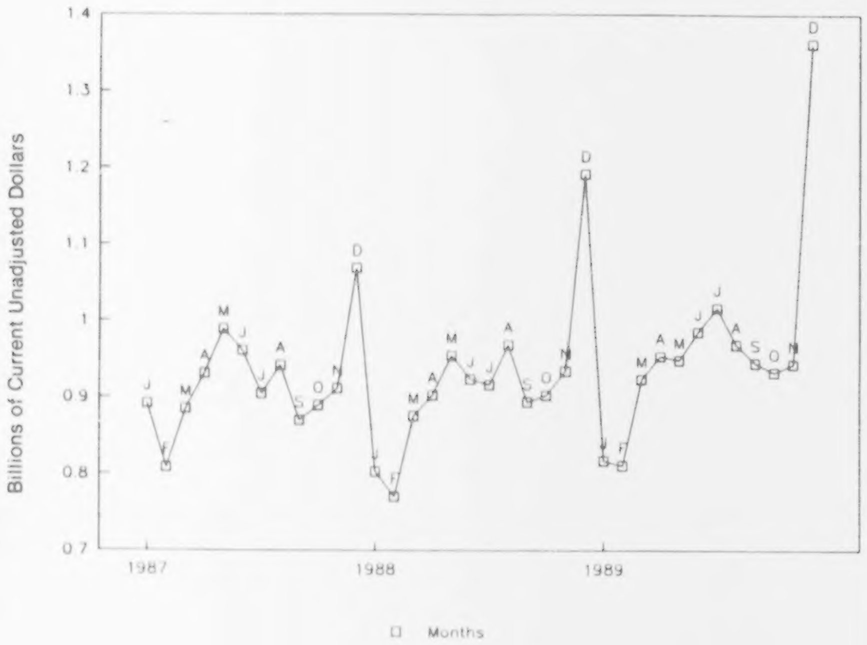
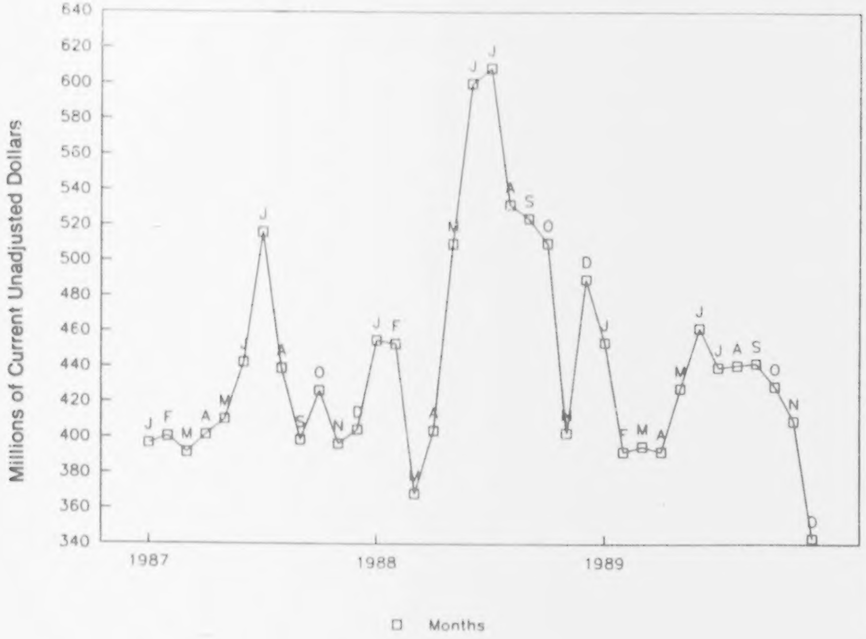


CHART 2

Total Durable Goods — Oklahoma
by month 1987-1989
($000,000)



below the 1988 total. This decline continued the erratic pattern of retail sales during the past six years in which increases during one year were followed by decreases in the following year. This pattern is shown in Chart 3 and Table 1.

Construction activity, which had been running ahead of 1988 during most of the year, turned down by 14 percent in December thus leaving the dollar volume of this economic sector for the year at about the same level as in 1988. Decreases during 1989 were experienced in all types of construction except for institutional building and street and highway construction. The nearly six-fold increase in the dollar volume of institutional building experienced in December raised the total for the year 57.4 percent ahead of the 1988 total. Conversely, the near 30 percent rise in street and highway building during December was not sufficient to counteract decreases in the earlier part of the year and as a result, street and highway construction was 6.2 percent less than in 1988. For the year, the dollar volume of single family dwelling construction exceeded the 1988 level by 12.9 percent while the investment in multifamily dwellings was more than 135 percent ahead of a year ago. As noted earlier, institutional building activity also exceeded the year ago level by more than 57 percent. All other types of construction continued to lag behind last year with both commercial and industrial building activity falling more than 33 percent behind 1988 levels and other nonbuilding expenditures running 1.7 percent below those of last year.

The outlook for 1990 remains guardedly optimistic despite a somewhat disappointing year for retail sales and the failure of construction activity to retain the vigor it displayed during the first three quarters of the year. The fact that personal income exhibited relatively good growth and that the banking industry has apparently solved its problems provide some of the basis for optimism. Of equal importance to these factors, however, is the recent increase in wage and salary employment—especially in the manufacturing sector. This latter indicator strongly indicates that demand for Oklahoma-made products is once again on the rise.

Neil J. Dikeman, Jr. is Director for the Center for Economic and Management Research.

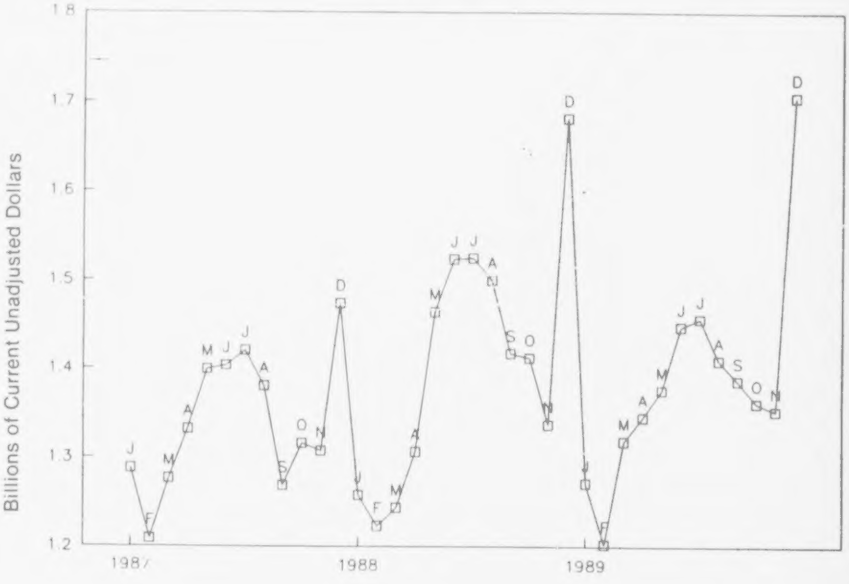
TABLE 1

Annual Retail Sales by Broad Category
Oklahoma
1985-1989

Annual Sales Total	Years				
	1985	1986	1987	1988	1989
Autos	3,717,498	4,556,521	3,250,543	3,939,059	3,558,403
Furniture	343,330	328,904	373,824	407,672	494,712
Appliances	255,663	235,919	284,607	291,867	266,445
Lumber	570,787	627,286	574,895	582,747	566,163
Hardware	69,596	63,532	63,693	67,912	69,888
Total Durable Goods	5,664,793	6,461,734	5,030,186	5,832,661	5,041,920
Gasoline	1,024,588	691,973	1,168,303	1,161,118	1,235,405
Apparel	629,357	628,757	888,550	859,258	872,227
Drug Stores	419,900	498,761	450,904	423,685	440,828
General Merchandise	2,411,599	1,904,519	2,474,226	2,595,314	2,776,001
Eat & Drink	1,682,869	1,871,701	1,599,614	1,621,829	1,725,712
Food Stores	4,067,541	4,679,484	3,653,049	3,565,291	3,694,665
Total Nondurable Goods	11,012,081	11,022,029	11,069,917	11,014,087	11,568,208
Total Sales	16,676,874	17,483,763	16,100,103	16,846,748	16,610,128
Total Sales Less Automobile Sales	12,959,376	12,927,242	12,849,560	12,907,689	13,051,725

CHART 3

Total Retail Sales — Oklahoma
by month 1987-1989
($000,000,000)



An Analysis of Oklahoma's Economy

CRAIG KNUTSON

THE FOLLOWING IS AN analysis of the economy for Oklahoma and its two largest metros during the 3rd quarter 1989. The analysis will cover seven subsectors of the economy, with the subsector carrying the greatest amount of weight first, followed by the remaining subsectors in decreasing importance to the GBI. A look at the 4th quarter 1989 is offered based upon preliminary data and professional intuition.

Energy

The Energy Subsector declined a scant 0.7 percent from the 3rd quarter of 1988 and was off 2.8 percent from the 3rd quarter of 1987. This quarter's decline represents the 5th consecutive quarterly decline for this subsector (when compared to the same quarter, previous year). Every indicator posted a decline from the previous year except Gross Production Tax Collections (GP). Its inflation-adjusted rise of 6 percent can be attributed solely to the natural gas market, which represents 64 percent of all GP tax collections, up from 61 percent last year. Once again, the largest declines from a year ago came from the two leading indicators: Seismic Crew Activity and Intent To Drill (ITD) Permits. Those two indicators fell 27.3 percent and 11.6 percent in the 3rd quarter, and are off even larger amounts from 1987 levels. The fact that exploration and production levels have been weak over the past two years speaks well to the reliability of these two indicators in forecasting future energy demand.

The 3rd quarter began with OPEC overproducing (21 + million barrels a day) and news that OPEC's downstream capacity (refining), both within their organization and outside, had been steadily growing during the decade of the '80s. Prospects for that trend to continue, and probably escalate, were considered "quite high," since oil prices, in inflation-adjusted terms, have actually declined over the past two years. November's daily domestic crude oil production in the U.S. was 7.48 million barrels/day, down 6.8 percent from November 1988, and imports still remain over the 6 million barrel/day level. With worldwide production capacity outstripping even a growing demand for oil, the "value-added" portion of the energy business represents the greatest potential for profits within the industry.

In Oklahoma, the price of Oklahoma Sweet started the quarter at $20.00/barrel and ended the quarter at $19.00/barrel. By the end of November, the price had dipped below $19.00/barrel and was destined to head even lower had Mother Nature not sent a series of Arctic blasts across North America. Thus, during the very season one would expect to see oil prices to rise, just the opposite occurred. While rig counts began their seasonal rise in December, the September-November monthly totals of 136, 136, 135 hardly bode well for subsequent production levels. Not surprisingly, oil and gas extraction employment was down from last year's 3rd quarter as well.

As has been the case for several years now, the "yang" of the energy industry continues to plod onward, despite poor price economics. The natural gas sector continues to generate positive revues from both the industry and analysts alike. In February 1982, severance tax collections for gas exceeded those for oil for the first time since at least the start of the decade; four of the next five months, that same pattern existed. By the end of 1983, tax collections generated from gas were virtually equal to those from oil. By the end of 1984, a new "king" had been crowned (52 percent of all severance tax collections), and that crown has not been relinquished since. Given the market, technological, and environmental factors of today, the crown should be worn for the remainder of the decade.

While the saga of the "diminishing gas bubble" continues, the consensus view is that widespread shortages, similar to those in the mid-1970s, are not likely this winter. In fact, according to Enron Corp, 650 trillion cubic feet of unproven natural gas reserves exist in the lower 48 states alone. When added to the proven reserves (160 tcf), "we have an extremely large resource base that is recoverable at very reasonable prices," Ken Lay, Enron CEO, recently stated. While it is in Enron's best interests to tout natural gas (they operate the nation's largest natural gas transmission system), others inside and outside the industry are bullish on gas.

The Oklahoma Corporation Commission's energy analyst (Rick Conner) recently reported that, while oil production fell over 9 percent through the first nine months of 1989, natural gas production rose 2.9 percent. At this pace, 1989's natural gas production levels will be exceeded only by 1988's! If Mother Nature keeps the deep freeze on, 1989 may break the record of 2.118 tcf produced just last year. And, remember, this is within a relatively poor price environment. A recent USA Today feature on the "Stocks for the 90s" touted energy as "the play for the 90s." Publicly-held companies in the natural gas production and transmission areas were among several that were noted. With yearly demand expected to continue, fewer alternative fossil fuels, deregulation, environmental concerns with oil, coal, and nuclear, the expected increase in gas-fired electrical plants, and a plentiful supply not "subject to foreign interruption," the energy industry as a whole, the natural gas industry, in particular, is poised for a major comeback in the 1990s.

As we approach the 1990s, Oklahoma, as an energy state, has prepared a statewide Energy Plan and has recognized the potential of natural gas as an economic development leader in the 1990s. From electrical generation to compressed natural gas fuel for vehicles, the natural gas industry is about to embark on a five to eight year growth cycle where exploration and longer-term contracts are the rule, not the exception. While the energy sector of the state's economy is not expected to achieve 1978-82 proportions, it remains a viable and valuable component to a diversified economy.

Manufacturing

After posting a "scant 0.4 percent gain" last quarter, the Manufacturing Subsector declined 4.7 percent in the 3rd quarter. The decline is further highlighted by the fact that this Subsector is also down from the 3rd quarter of 1987 (–1.5 percent). The chief contributor to this weakness is the "weekly hours worked" variable. Since this variable is, within the GBI, negatively correlated with employment, its continued increase over last year's level and 1987's level has provided a negative hit to the index. As reported in this space over the past five years, rises in the weekly hours worked signifies that manufacturers are reluctant to hire more full-time staff. Given the weakened factory conditions at the national level over the past 6-8 months, hiring practices are mirroring manufacturing confidence quite well. Manufacturing employment in Oklahoma, while still positive in quarter-to-quarter comparisons, has weakened dramatically. Total statewide manufacturing employment was up a slight 0.7 percent from 3rd quarter of 1988. The numbers for Oklahoma City and Tulsa were equally unimpressive: +0.9 percent and +0.5 percent, respectively.

The 3rd quarter began with national factory orders declining to an eight month low, profits down almost 5 percent, and capacity utilization still falling. Demand for our manufactured products had weakened, and nearly every statistical measure made that statement conclusively. By the end of the quarter, the Purchasing Manager's Index reported its fifth consecutive monthly decline. To top it all off, U.S. manufacturers after-tax profits was unchanged from a weak 2nd quarter and down from 3rd quarter 88's level. The largest decline occurred in the durable goods sector, a surprise to no one. So, the 3rd quarter was hardly robust at the national level either!

Unfortunately, the 4th quarter hasn't been much better, for the nation or Oklahoma. November's manufacturing employment report showed at 27,000 employment decline from October, but, more disturbingly, factory employment is down almost 165,000 since March! The computer, steel, and auto industries continue to sag, with no apparent end in sight. Oklahoma's manufacturing employment posted a rare year-over-year decline in October, dropping to 164,300 in October. Preliminary November numbers have not yet been released, but the trend in Oklahoma mirrors that seen at the national level.

As we close out 1989, new orders for durable goods, a highly volatile indicator, rose in November (5.1 percent), while orders for machine tools were down 34 percent in the same month and remain weak in December. Auto makers and defense contractors were reporting the largest hits. With $1,000 rebates and 4.8 percent/48 month financing, the auto makers are hoping to push their 1990 models so that extended plant idling can cease. Defense contractors, seeing Soviet Perestroika flourishing and all six of the Warsaw Pact countries turning to non-communistic forms of government, must be concerned about future defense spending levels, especially as it relates to weaponry and new systems. Oklahoma, which ranked 27th in the nation in 1988 in terms of total defense spending, has a lot to lose with the Cold War all but over. The "private" sector that has relied so heavily on DOD $ to employ its work forces will also suffer.

The Oklahoma City GM plant as well as the major Air Force and Army installations around the state are gearing up for an uncertain 1990. GM has already announced a 3,200 payroll cut nationwide, 600 of that in Oklahoma City. The only good manufacturing news this author can see for the upcoming year is that foreign investment in new plant and equipment continues to grow and that inventories are under control. The latter is especially important in soft or recessionary times, in which, depending upon your perspective, we're definitely mired. Computerization of plants, reducing the differential in the cost of capital between competing nations, and an attitude and performance of quality are going to make or break U.S. manufacturers. With manufacturers only planning a 3.8 percent increase in new capital spending in 1990 (down significantly from the 10.1 percent projection for 1989) and sales projected to increase by only 2 percent, lower interest rates and a new attitude will have to be the primary engines. Oklahoma manufacturers should take heed; 1990 is not likely to be a bullish year.

Construction

The Construction Subsector posted a 2.9 percent improvement in the 3rd quarter, up from the 2nd quarter decline of 4.2 percent. The volatility within this subsector is driven by "one-time hits," and this quarter was no exception. Due to a large nonresidential contract in the Oklahoma City Metro, statewide nonresidential values posted an inflation- and seasonally-adjusted 75 percent increase over last year's levels and a 41 percent increase from 3rd quarter 1987! Residential activity was also up (+17.7 percent) from last year. However, the nonbuilding portion of the subsector, the indicator that has provided the greatest positive push over the last four years, was down 35.4 percent from last year. Nonbuilding contracts, primarily infrastructure improvements, have weakened since the completion of several major roadway projects. Without new bond issues and adequate state funding of scarce federal funds, this indicator may continue to be a drag on an already weak subsector.

The numbers for Oklahoma City were quite healthy, unlike its sister in Tulsa. Residential and nonresidential activity were up from last year and, not surprisingly, so too were the tax collections on the sale of building material. The only posted gain in Tulsa came in the residential side, with all the comparisons to 1987 down, some significantly. I don't mean to beat a dead horse, but for those of you who have read this piece religiously over the years, it's the same story, different year. The most recent data associated with these variables is, from an historical perspective, quite low. When, for example, new construction permit activity once averaged 3,500-4,500 units PER MONTH, and now we don't see that for an entire year, comparisons can become skewed. Consequently, one has to view any singular quarterly increase with suspicion. As with any data, one quarter does not a trend make. While the overall GBI benefited from the growth, don't look for this subsector to be a consistent contributor future GBI advances.

In the 3rd quarter, we began receiving our first concrete signs of a real estate slump in New England. By the end of the 4th quarter, it was unmistakable. As an example, Moody's Investors Services Inc. cut its debt rating for One Bank Corp., Maine's largest bank-holding company, in July, due to a large rise in nonperforming assets. By December, the State of Maine was reporting a shortfall and "revenue enhancement" measures are almost a certainty. What happened in our region and in Arizona is now occurring in New England and, to a lesser degree, in California. As one real estate analyst from Massachusetts recently remarked: "Certainly there was not a lot of sober thought given to some of these projects." Bankers, thrifters, real estate economists from the South Central part of this country can certainly relate to that explanation.

Is it going to improve? Yes! When? Sometime! The glut is here and has to be worked off, not just in Oklahoma, but nationwide. Whether its the Commerce Department or F.W. Dodge, the 3rd quarter was not a very positive period, despite declining interest rates. On the residential front, regional disparities, which were more than double ($150,000 median value house in the Northeast vs. $70,000 in the Midwest), are beginning to flatten. Unfortunately, the decline in the disparities is more a function of rapid cooling in the Northeast than rapid heating in the Midwest. In reality, the rate of decline is less dramatic in the Midwest than in the Northeast. But equilibrium is virtually unreachable due to both economic and market reasons. While residential foreclosures are abating somewhat in Oklahoma and Texas, residential foreclosures are at "all-time, intergalactic highs" in Phoenix. That space trip is spreading to the coasts. When employment begins to weaken, especially in the high-waged manufacturing sector of the economy, mortgage delinquencies move countercyclically to new mortgage originations. The concept of Supply-Demand Imbalance, once thought to be found only in the "energy-patch," is becoming contagious.

The news is mixed for Oklahoma. Home sales remain weak in Oklahoma City but stronger in Tulsa. Sales of apartment complexes are up substantially from 1988, but, then remember, everything is relative. While office vacancy rates remain in the 27-30 percent range, Oklahoma City Metro's shopping center vacancy rate fell to a two year low and the sales prices of executive-size homes (2,500-3,500 sq. ft.) actually rose (+1.6 percent). The bottom line, however, is still negative. We continue to permit new construction in markets that are grossly overbuilt.

The Resolution Trust Corporation (RTC) recently announced that "more than 1,000 properties across the state will be aggressively marketed" in 1990. And that's only the property the RTC has, which is post-January 1, 1989 property! Don't forget about the FDIC and all of its "thrift pickups" from 1987 and 1988. The FDIC, in addition to RTC, also manages the FSLIC Resolution Fund, as well as properties, both residential and commercial, under its own portfolio. The "1,000 properties" is just the tip of the iceberg; if that's true, overall market conditions cannot

LOGICALLY expect to stabilize or improve before 1995. While there may be a few geographic or real estate markets that do, those will be few, far between, and short-lived. "Purchase and refurbish" should be Oklahoma's real estate policy of the 1990s. "Razing" is not a bad backup. "Generating demand" (job creation) must become the economic survival policy of all Oklahomans. Dealing only with one side of the "Supply/Demand Imbalance" equation will prove to be ineffective. How the government disposes of their repossessed properties will play a big role in how soon the markets recover. In other words, 1995 might even be optimistic!

Consumer Demand

The Consumer Demand Subsector posted a rare 0.7 percent improvement in the 3rd quarter. The three most prominent components — sales tax, general merchandise, and apparel tax collections — all posted increases from last year's 3rd quarter. Tulsa was a contributor to those increases, while Oklahoma City remained (s) weak in the 3rd quarter. The data, adjusted for seasonality, inflation, and tax increases, showed less than 2 percent gains across the board. The gains can be attributed to a number of factors. Several major statewide events were held in the 3rd quarter, including Tulsa's National Conference of State Legislatures (August) and the nine-day U.S. Olympic Festival (July) held primarily within the Oklahoma City Metro. Those events, along with an increase in the number of people working, kept the numbers from running negative.

After peaking out at 5.2 percent in the 2nd quarter, the national CPI ran at a 4.7 percent clip in the 3rd quarter, the lowest quarterly level in 1989. Through November, the 4th quarter level is 4.6 percent, so, while we haven't "whipped inflation" yet, we are slowly moving in the right direction. That is good news for the consumer and, therefore, for the retailing community. The Conference Board's Consumer Confidence Survey remained at a high level throughout the 3rd quarter and, though dipping just slightly in December, signals a "reasonably good" holiday season. As Fabian Linden, Executive Director of the CB's Consumer Research Center, pointed out: "The prevailing economic climate for consumers continues to be comfortable — low unemployment, moderate inflation, and declining interest rates. We still don't see any signs of recession in our consumer-confidence survey."

In Oklahoma, the picture is not quite that strong. Through the first nine months of the year, total retail trade in the state and both metros remain down (-2.1 in the state and -2.2 and -1.4 in Oklahoma City and Tulsa). However, excluding auto and lumber sales, retail trade is up 5 percent and 4.5 percent respectively. Most of the decline has occurred in the auto category, and don't look for that to improve in the 4th quarter. While the biggest jump in retail sales occurred nationally in November (+0.8 percent), similar results are showing up in Oklahoma. October's sales tax collections, adjusting for local tax increases, were up in virtually every community within the Oklahoma City metro, while Tulsa posted a 9.9 percent increase from last year. Whether those trends carry themselves into the Christmas season, only time will tell.

As the Christmas season draws to a close, the reports from area merchants and Telecheck Southwest are only modestly optimistic. Preliminary estimates from TeleCheck show that retailers in Oklahoma City showed about a 3 percent increase from last year, while Tulsa's sales fell 1 percent. Since they are preliminary and represent only a sample, additional data should be used before an accurate analysis for either market can be made. As CEMR recently reported in its Business Bulletin, the real weakness within the retail sales area is in durable goods. In fact, the non-durable area has posted five consecutive quarterly increases (when compared to the previous year). That is a good sign as we conclude the holiday season, because the growth rates since the 3rd quarter of 1988 have been positive in both number and slope.

As the State's Comptroller, Doug Enevoldsen, recently remarked: "Oklahoma's economy is no longer a recessionary economy. The Oklahoma economy will virtually parallel the health of the national economy in FY 1991, although there may be some variances." This from the man who tracks the state's revenue patterns and continues to see year-over-year growth, albeit slight. Revenue from Income and Sales taxes, representing over 70 percent of the revenue base, continue to grow and signify that, like his/her national counterpart, the Oklahoma consumer is still confident. If interest rates continue their decline (as I forecast they will) and the rebates and incentive packages spread, we will also derive a large benefit from auto sales this year. 4.8 percent over 48 months, including many of the dealers' most popular cars, is one way to ensure a stronger than forecasted 1990.

Agriculture

The Agriculture Subsector posted yet another quarterly gain, although it has begun to show some weakness as of late. Both beef and wheat prices posted seasonally- and inflation-adjusted increases from the 3rd quarters of 1987 and 1988. Both were up around 3.4 percent from last year and wheat prices were up almost 51 percent from two years ago. But, prices, especially for wheat, have begun to weaken, as wheat prices fell 2.9 percent from last quarter. Without adjustments for inflation, the numbers are essentially flat. While the 10th Federal Reserve District showed that credit conditions "strengthened modestly" in the region, gains in values remained the smallest while interest rates the highest in Oklahoma.

After a very wet and cool summer, the USDA's Agricultural Statistical Board forecasted overall increases in crop production, especially in grain sorghum and peanut yields. That was in September. After that favorable summer, Oklahoma has been cursed with virtually no rainfall, high winds, and extremely cold temperature of late.

While the annual rainfall total is up from last year's levels, we unfortunately received most of it in a couple of months. Consequently, reports of "excellent growing conditions" have turned to "not a pretty picture at this point." Ah, Mother Nature! In late summer, early fall, there was talk of more acres being planted and higher yields per acre, resulting in a very good 1990 crop. As we enter 1990, things are far less certain. The only real positive today is that grain stocks (wheat in particular) are down, and that always has a positive influence on prices.

Winter wheat is Oklahoma's second most valuable farm commodity (next to beef) and Oklahoma is the second leading producer of that commodity (next to Kansas). As the globalization of the market place continues to unfold, winter wheat plays an important part in Oklahoma's economic future because it is a critical export commodity. News from both the Soviet Union and China that their production levels are down bodes well for the U.S. and Oklahoma, in particular. With their need for imports rising, we must be in a position to satisfy that demand, or others in the market can capture that niche. And it is a sizeable niche. Those two countries are expected to import almost 60 million metric tons of wheat in 1989-1990, and the U.S. is expected to capture just over 50 percent of that demand. Mother Nature will, once again, play an instrumental role in how much wheat Oklahoma will have to export.

News within the beef industry has been relatively quiet. Like the grain farmer, the beef farmer is looking more and more toward exports. Like many of the grains, herd size is low and, unless ranchers increase their herd size, prices for beef will remain strong. A small herd size, lower feed prices, and increased foreign demand should cause herd size to rise in the early 1990s. The American Meat Institute has reported two other favorable findings with respect to meat: (1) after years of decline, red meat consumption has stabilized: and (2) the export value of meat and meat products surpassed the value of imports for the first time ever in 1988. With the Mexican Government lifting its restrictions on some live cattle and all meat in 1989, that market becomes a prime target for Oklahoma and Texas ranchers. With the recent events in Eastern Europe, at least six more countries (Warsaw Pact) have opened their markets to exporters, albeit some more than others. The export potential is strong, but it will remain "potential" without the commodity and proper marketing and negotiations.

Remember, the size of one's economic pie cannot expand without the exportation of goods and services and the importation of new capital. With prospects in the manufacturing area dimming, agriculture can play a significant role in this state's quest for economic growth. Before we get lost in the prospect of higher prices for raw commodities, let us not forget that catfish farming, peanut processing plants, and other value-added or import substituting agricultural endeavors must flourish in the 1990s if agriculture is going to play a significant role in this economy. Growing a commodity is one thing; adding value to it is another. Virtually any country, given the proper climatic conditions, can do the former. It takes planning, foresight, and capital to achieve the latter. That is part of the diversification process.

General

The General Subsector posted a 1.6 percent increase over last year's level and is up almost 15 percent from 1987. The 3rd quarter increase represents this subsector's fourth in a row, although none have been higher than 2.1 percent. Despite a slight slippage in Wage and Salary Employment (-0.03 percent) and Oklahoma City's Help Wanted Index (-0.7), all the employment indicators remained positive. Unemployment rates have declined substantially, and that has occurred while both the labor force and total employment have also posted increases. I have stated many times before that low unemployment rates, in and of themselves, are not good indicators of economic health. However, when combined with growing employment and labor force bases, declining unemployment-rates are significant. Other major contributors to this subsector's quarterly increase included real personal income (+1.5 percent) and unemployment insurance claims (-6.2).

As the 3rd quarter began, one of the most pressing questions asked by both economists and politicians alike was: Why is the Fed trying to kill the expansion? Most have felt that Greenspan & Co. have spent too much effort trying to reduce inflation to zero, at the expense of the economy as a whole. The dollar continued to rise and the growth in the money supplied slowed, even with quarterly inflation rates declining. The stock market sat at 2450 and Fed Fund rates were almost at 10 percent. The economy was sluggish and forecasts for the 2nd half of the year were for more of the same. By the end of the quarter, the Dow was up 10 percent to 2690, the U.S. dollar had dropped 3 percent, and the Bond Market Index and interest rates stayed about the same. To top all that off, the GNP number was revised UPWARD to 3 percent. Why should the Fed loosen money if the economy is running at 3 percent?

The answer, no doubt, will show up in the 4th quarter, when many are looking at less than 1 percent growth in GNP and a number of others are calling for a negative GNP rate. Unfortunately, we're not going to know the "final" GNP number for the 4th quarter and the year as a whole until March. While I think the rate will lessen, I'm not prepared to call for a negative rate. As Eric Heinemann of Heinemann Economics recently stated: "There is little doubt that interest rates will decline substantially in the first half of 1990. Alan Greenspan has no wish to become the scapegoat for a severe economic retraction." I suspect he doesn't want to be blamed for even a minor one!

December marked the beginning of the eight consecutive year of U.S. economic growth. The National

Association of Business Economists' most recent poll revealed that we can expect at least another three years of growth. As a member of that organization, I both contribute to and agree with their (our) findings. The Business Council, composed of 100 CEOs of the country's large corporations, have forecasted a "significant U.S. economic slowdown for 1990," but growth will rebound in 1991, giving the country "an unprecedented nine consecutive years without a recession." The Administration, to no one's surprise, is also forecasting growth in 1990 and beyond, with 2.6 percent growth forecasted for next year. Despite all the threats of a recession, those that have forecasted one for this year are absolutely wrong (technically, it takes two consecutive quarters of decline to constitute a recession), and those that are forecasting one for next year are in the minority. You'll note that I didn't say they, too, were wrong . . . yet!

The bases for averting a recession next year revolves around several factors. First, lower interest rates, brought about by Fed action and subsequent lowering of the prime by banks. Second, lower inflation is expected, although the recent hard freeze will put further upward pressure on food prices. However, wage contracts and energy prices are expected to post only modest gains next year. Third, the dollar should decline, which will continue to favor the export side of the economy. There appears to be a strong correlation between the recent rise in the dollar, decline in manufacturing employment, and a slight worsening in our trade deficit. Finally, business investment in new plant and equipment must expand, and at a more rapid rate than is currently being forecasted (+4.9 percent). The low dollar is not a permanent feature of the world economy; capital investment is absolutely essential to improve efficiency, quality, and productivity. If these factors occur in 1990, and the consumer continues to do what he/she has told us they will, a 2.6 percent growth rate for 1990 may not be that farfetched.

Financial

The Financial Subsector continues to its year-over-year decline, although its rate of decline is the lowest in almost two years. The subsector fell 5.8 percent from last year, due to continued negative numbers emanating from the Saving and Loan industry. The net income of Oklahoma's two largest publicly-traded banks posted a sizeable improvement over last year's level, but not sizeable enough to offset the thrift problems. All three thrift variables posted declines: loan closings down 38 percent, loan commitments down 65 percent, and total deposits down 20.4 percent. All the numbers have been seasonally- and inflation-adjusted.

While the individual indicators for the thrift industry continue to run negative, the 3rd quarter report on Oklahoma's Saving and Loans showed some improvement. However, the improvement is in the form of a "smaller loss" than last year's 3rd quarter! Nationally, the thrift industry lost $3.8 billion in the 3rd quarter, with $26.3 million of that coming from Oklahoma thrifts.That is an improvement from the $33.3 million loss posted in the 3rd quarter of 1988. The problems are not geographically restricted to just the energy patch either. Texas had the biggest loss of any state ($1 billion), with Arizona ($443 million), California ($426 million), and Pennsylvania ($322 million) following right behind. To put Oklahoma's "improvement" in even better perspective, every contiguous state to Oklahoma posted a larger loss than Oklahoma, ranging from $42.3 million in Missouri up to $245 million in Arkansas. Colorado, Kansas, and New Mexico fell somewhere in between.

President Bush's "Rescue Plan," which went into effect August 9th of this year, originally appropriated $50 billion through 1991. But as one financial institutions analyst recently remarked: "We still have as much as $20 billion in losses out there that haven't come to the surface. It's like water torture. It's going to continue quarter, after quarter, after quarter." The experts continue to call for the closure of still-open insolvent thrifts and the "quick disposal of their assets." Obviously, tasks that are easier said than done. What the "quick disposal" policy tends to do is severely damage local real estate markets, which causes Savings and Loans that are either borderline or healthy to mark down their asset base. This in turn puts them in jeopardy of not being able to make the new capital requirements, therefore, putting them under either closer FDIC scrutiny or outright control.

As the 3rd quarter began and the "rescue plan" was adopted, the Administration felt that this plan and its $166 billion budget would stop the bleeding and, ultimately, resolve the crisis. By the middle of December, President Bush was quoted as saying: "I am now told that that might not be enough." This author, for one, is not surprised. The $400-500 billion estimates made over the past year in this space are becoming more and more believable. The real estate slowdowns in New England and California are not likely to help this situation at all!

While the banking environment is, relative to the thrift situation, a healthy one, depositors beware. The banks are faced with Third World debt, leveraged-buyout loans, junk bond failures, and, yes, even real estate losses. While Oklahoma bank failures have been abating since their annual high of 31 in 1987 (12 in 1989), business, industrial, and commercial foreclosures are playing a major role in the banking industry's inability to recover more rapidly. According to Mckinsey and Co., real estate loans comprised 23 percent of bank portfolios in 1974; they comprise 37 percent today. Loans to commercial properties, "the most worrisome area," represent 18 percent of total portfolios. Given the plethora of space that has been built during the decade of the '80s and the slackening of demand as we approach the '90s, more nonperforming or underperforming loans are expected. After all, high vacancy rates produce less than adequate cash flows. In the high vacancy rate environment of the past 5-7 years, those "less than adequate cash flows" have a way of accumulating." Like interest payments on the ever-burgeoning national debt, the problem only worsens.

As stated previously, banks have performed more profitably than Savings and Loans, at least in this state. While the nation's commercial banks lost $744 million in the 3rd quarter (the first loss in over 2 years), the 443 Oklahoma banks had a net income of $23 million. That represented the fourth quarterly gain in a row. The last losing quarter was the 3rd quarter of 1988, when a $27 million loss occurred. The news is mixed, however. While our banks continue to see the amount of nonperforming assets decline, so, too, do their loans and deposits. It seems like a vicious cycle downward, despite the quarterly profitability reports. The problems bankers, thrifters, and their shareholders face today is a result of what happened "yesterday." As Edward Kane, Ohio State University economist, summed it up: "When you get desperate people doing desperate things, on average they tend to lose money." And not just theirs!

Conclusion

I closed last quarter's report with the statement: "slow growth is better than no growth." Given the direction of the national economy, I might want to close this quarter's report with "no growth is better than negative growth." But, I don't like my options for the next quarter if I use that! Seriously, growth, as forecasted over two years ago, has been slow. Quarterly growth rates from the General Business Index as well as OSU's Quarterly Econometric Model demonstrate that finding quite conclusively. The employment data for Oklahoma and its two major metropolitan areas paints a similar picture. My "statuitive" forecast (that's a statistically- and intuitively-based forecast!) is for 2.2 percent growth in the GBI, annual 1989 to annual 1990. OSU's GSP forecast calls for 1.5 percent growth from 4th quarter 1989 to 4th quarter 1990. If I'm a little high and they're a little low, then we're a whole lot right. And no matter how you slice it, the slow growth pattern will continue.

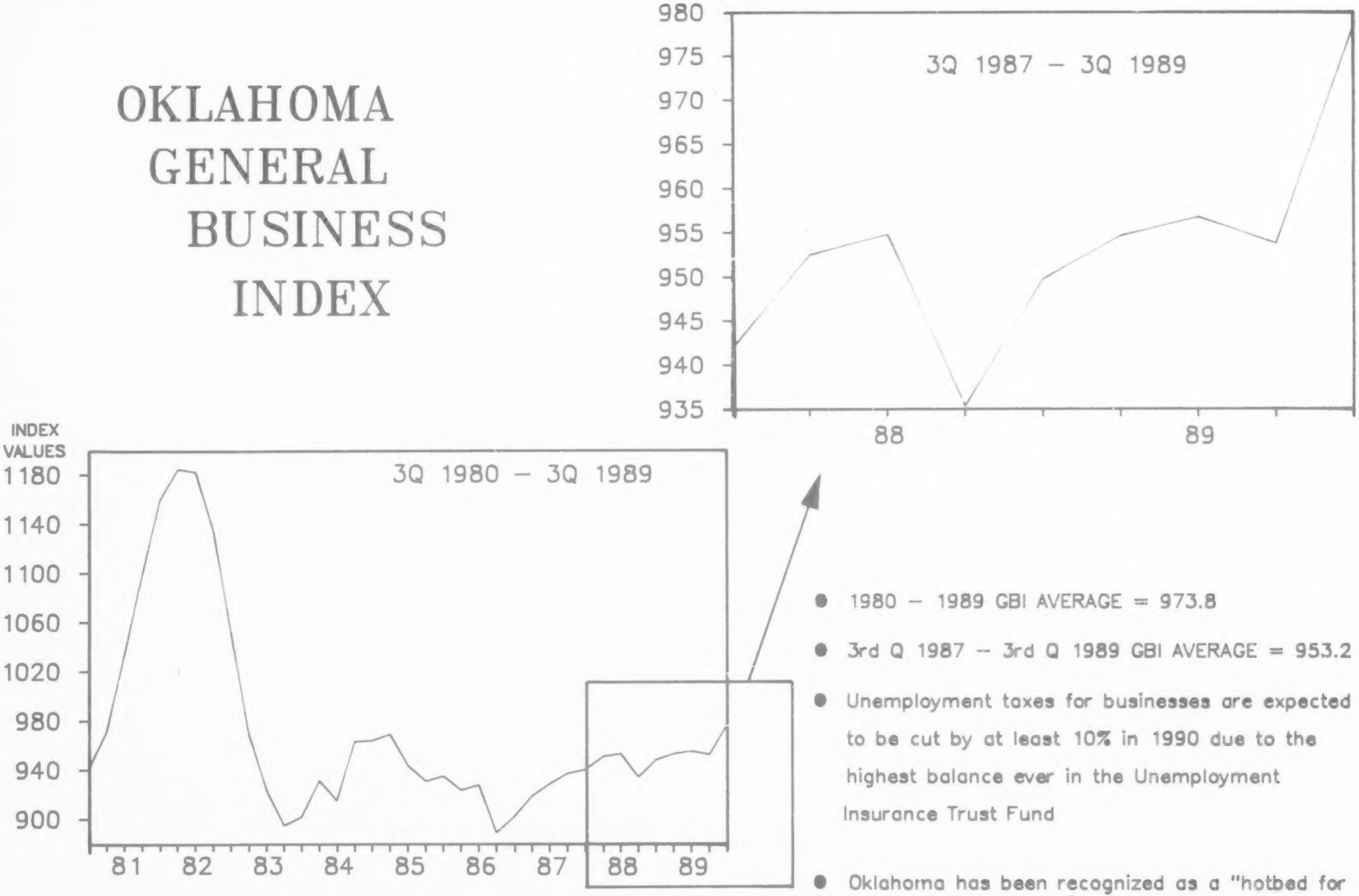
Oklahoma remains very dependent upon what goes on nationally and internationally. The dollar rises, the manufacturing sector turns down nationally, and we weaken as well. For example, in November 1988, statewide manufacturing employment was 165,200, 6,000 ahead of November 1987. In November of 1989, the preliminary manufacturing employment number is 165,200, meaning no change at all. No change is not positive, unless you compare it to the nation's manufacturing base, which has lost almost 150,000 factory jobs since March! The eventual impact on Oklahoma hasn't yet been felt, but the tremors of weakness are unmistakable.

The 4th quarter GBI will, based upon preliminary data, be weaker than the 3rd quarter. Whether the impacts of lower interest rates, looser money, and continued growth among key international economies can offset the expected defense cutbacks, financial and real estate losses, and 90 day supply levels among domestic auto dealers is uncertain. However, two major factors that have fueled past recessions are NOT prevalent in today's economy: inflation and excess inventories (with the exception of autos). With inflation moving toward the 4 percent level, inventory levels at less than 1.6 months (backlog), and a looser monetary policy almost a certainty, an "imminent recession" is unlikely.

Oklahoma's employment and personal income numbers continue to slope positively and $50 billion economies do not turn precipitously upward or downward unless dominated by one or two industries. Oklahoma's economy is far more diversified than it was 5-10 years ago, and while energy, manufacturing and government numbers remain weak and construction continues to decline, the Services industry keeps right on truckin'. Expect the same trends in 1990, unless the U.S. dollar turns dramatically downward. I'm betting against that and betting, instead, on "more slow growth."

Craig Knutson is Staff Economist for Southwestern Bell Telephone Company.

OKLAHOMA GENERAL BUSINESS INDEX



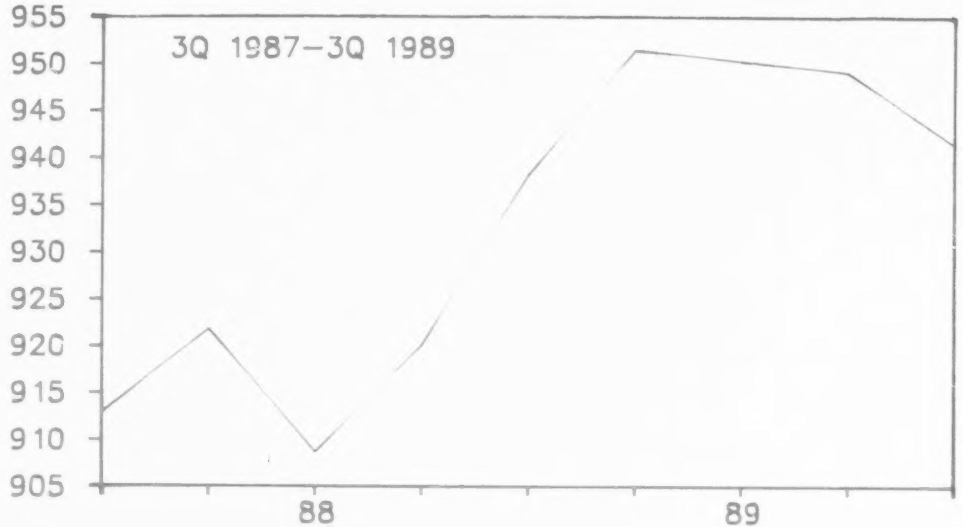
3Q 1989 AVERAGE VALUE	2Q 1989 AVERAGE VALUE	% CHANGE[1]	3Q 1988 AVERAGE VALUE	% CHANGE[1]	3Q 1987 AVERAGE VALUE	% CHANGE[1]
978.9	953.9	2.6	949.9	3.1	941.9	3.9

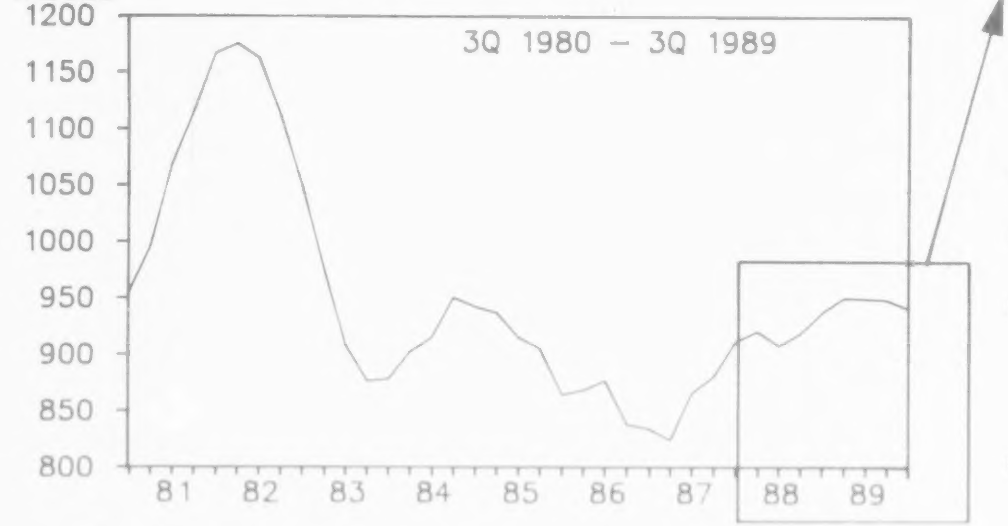
[1] COMPARED TO CURRENT QUARTER

- 1980 – 1989 GBI AVERAGE = 973.8
- 3rd Q 1987 – 3rd Q 1989 GBI AVERAGE = 953.2
- Unemployment taxes for businesses are expected to be cut by at least 10% in 1990 due to the highest balance ever in the Unemployment Insurance Trust Fund
- Oklahoma has been recognized as a "hotbed for inventors," currently ranking 23% above the national average in patents per capita.

SOURCE: SWBT ECONOMIC DEVELOPMENT DISTRICT/CEMR

OKLAHOMA CITY GENERAL BUSINESS INDEX





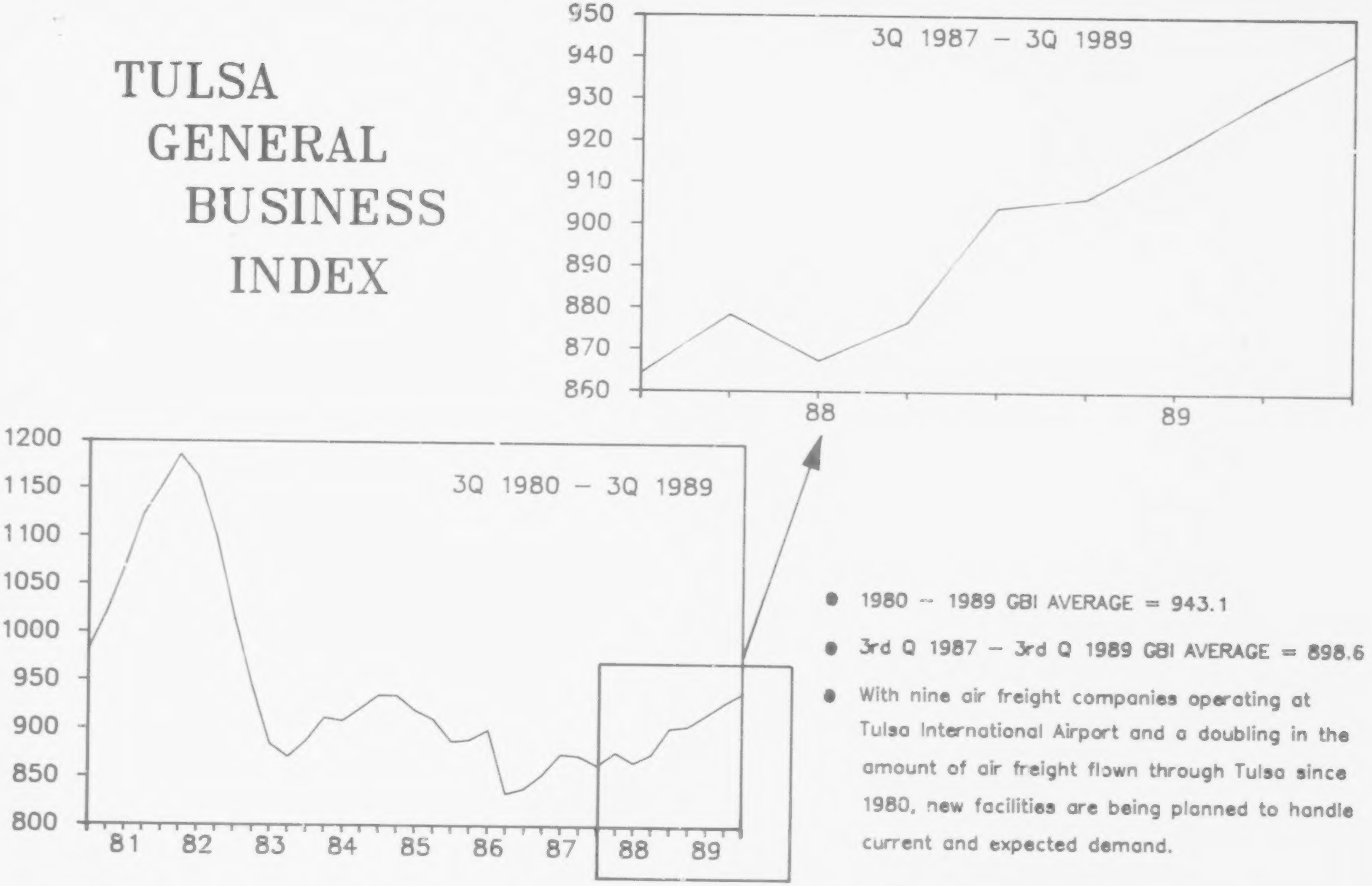
3Q 1989 AVERAGE VALUE	2Q 1989 AVERAGE VALUE	% CHANGE[1]	3Q 1988 AVERAGE VALUE	% CHANGE[1]	3Q 1987 AVERAGE VALUE	% CHANGE[1]
941.4	949.1	-.8	938.3	.3	913	3.1

[1] COMPARED TO CURRENT QUARTER

- 1980 – 1989 GBI AVERAGE = 950.5
- 3rd Q 1987 – 3rd Q 1989 GBI AVERAGE = 932.7
- The IRS will open their Automated Collection Services branch in January 1990; when fully operational, the branch will employ 130.
- The OKC Metropolitan area ranked 49th out of 333 cities in terms of overall "livability," according to the 1989 Places Rated Almanac.

SOURCE: SWBT ECONOMIC DEVELOPMENT DISTRICT/CEMR

TULSA GENERAL BUSINESS INDEX



3Q 1989 AVERAGE VALUE	2Q 1989 AVERAGE VALUE	% CHANGE[1]	3Q 1988 AVERAGE VALUE	% CHANGE[1]	3Q 1987 AVERAGE VALUE	% CHANGE[1]
941.5	930.5	1.2	904.2	4.1	864.3	8.9

[1] COMPARED TO CURRENT QUARTER

- 1980 -- 1989 GBI AVERAGE = 943.1
- 3rd Q 1987 – 3rd Q 1989 GBI AVERAGE = 898.6
- With nine air freight companies operating at Tulsa International Airport and a doubling in the amount of air freight flown through Tulsa since 1980, new facilities are being planned to handle current and expected demand.
- Tulsa's convention business continues to expand, with over 225,000 visitors in 1989 alone. That is a 43% increase over just three years ago.

SOURCE: SWBT ECONOMIC DEVELOPMENT DISTRICT/CEMR

Oklahoma Banking 1989

NEIL J. DIKEMAN, JR.

DURING 1989, THE BANKING industry in Oklahoma continued the improvement noted in 1988. An examination of the banking industry in two other West South Central States (i.e., Louisiana and Texas) revealed that the industry in these states also experienced similar improvement. For example, bank closings reached epidemic levels in these between 1985 and 1988 as the total number of banks dropped from 2,897 in the earlier year to 2,161 by the end of 1988. In addition to the decline in banking offices, the market for loans also showed significant losses as did owners' equity and a number of other industry indicators. However, on a more optimistic note, 1989 banking statistics for the area indicated that improvements in the health of the industry noted in 1988 continued during 1989. In an effort to determine how well banks in Oklahoma performed in 1989 relative to the rates of recovery experienced by banks in the remaining two states, changes in various performance and operating indicators of Oklahoma banks between 1988 and 1989 were compared with those of the banks in the remaining two states. In order to eliminate the variations in the populations and numbers of banks which exist among the three states, all comparisons included in the article are based on the "average" bank in each state. In addition to comparisons of changes in key indicators of average banks in the study area, comparisons of changes in the key indicators of the average Oklahoma bank were made with those of the average "high performing" Oklahoma bank. These comparisons are discussed in turn in the remainder of this article.

Comparative Bank Operations Ratios

The performance of the average bank operation in Oklahoma during 1989 continued the upward trend begun in 1988 while the performances of average banks in Louisiana and Texas generally exhibited less significant signs of improvement. Much of the growth rate in Oklahoma during the past two years is possible due to its proportionately more severe losses between 1982 and 1987 than was the case in the other states studied which resulted in a lower base from which the Oklahoma growth rate was measured.

Some of the more significant signs of continued improvement were the growth in average owners' equity in Oklahoma banks that reached 8.3 percent of total liabilities which was the highest among the three states studied. Also, the investment in securities by the average Oklahoma bank rose to 34.8 percent of total assets which was also the highest among the banks in the study area. While on the one hand, the increases in these performance indicators reflects a greater security and safety in a bank, it also suggests either that the loan market for the bank has become increasingly weaker or that bank management has less confidence in the loan applications it receives than it has had in past years. Regardless of the reasons, however, the rise in security investments made by the average Oklahoma bank between 1988 and 1989 was accompanied by a decrease in the proportion of funds loaned during 1988 to 46.1 percent of assets which was the lowest of the three states. On the brighter side, the loan to deposit ratio of the average Oklahoma bank rose from 53.1 percent in 1988 to 54.2 percent in 1989. Despite this increase, however, this ratio remained well below that of either Louisiana or Texas.

Total deposits in average banks in both Oklahoma and Louisiana rose between 1988 and 1989 while those in Texas declined which suggests that the confidence of patrons of banks in Oklahoma and Louisiana is increasing while Texas patrons still view their banks with less optimism.

The net results of these changes in the condition of the average bank noted thus far is that the net income of the Oklahoma bank represented 0.7 percent of average assets in 1989 compared with 0.4 percent in 1988. The ratio of net income to assets in the average Arkansas bank meanwhile rose from 0.2 in 1988 to 0.4 in 1989 and in Texas, the ratio rose from -0.6 percent to -0.2 percent. Details of these and other operating measures appear in Table 1.

Comparative Average Bank Performance Ratios

As was the case with the operations aspects of the average Oklahoma bank, its performance indicators in almost every case tended to compare very favorably with those of the two comparable states. In 1989, the average Oklahoma bank experienced a net income return on equity of 6.8 percent. This exceeded that of the average Texas bank which was 6.4 percent below owners' equity while that of Louisiana was 3.6 percent. Roughly, the same pattern was followed by the comparisons of net return on assets where the ratio for Oklahoma showed a return of 0.6 percent whereas the average bank in Louisiana was 0.4 and the average bank in Texas reflected a negative return of 0.2 percent.

The average Oklahoma bank also showed up well when comparing the average yield of net loans. In this case, the yield of net loans held by Oklahoma banks of 12.3 percent exceeded both the 11.9 percent yield experienced by the average Louisiana bank as well as the 12.1 percent yield experienced by the average bank in Texas. Insofar as ratio of equity to total assets is concerned, equity of the average bank in Oklahoma was 9.5 percent of total assets while equity levels in Texas and Louisiana banks were 8.3 percent and 9.1 percent respectively.

In other performance indicators, the average Oklahoma bank fared less impressively than those discussed thus far as it registered a net equity gain during 1989 of 1.9 percent which was better only than the 0.8 percent equity loss which was sustained by the average bank operation in Texas. On the other hand, very little differences were noted in the area of earning asset yield. As in the former indicator, both Louisiana and Texas banks registered yields of 10.8 percent while the average Oklahoma banking registered the lowest yield of 10.7 percent. Net loan yields ranged from 11.9 percent (the average Louisiana bank) to 12.3 percent (the average Oklahoma bank) with the yield of the average Texas bank being 12.1 percent. The weakest areas of performance of the average Oklahoma bank were the rates of asset growth (0.3 percent versus 0.8 percent for Texas).

TABLE 1

Average Bank Operating Ratios
Louisiana, Oklahoma and Texas
June 1988 and June 1989

	1988			1989		
	Louisiana	Oklahoma	Texas	Louisiana	Oklahoma	Texas
Banks per 100,000 Population	5.6	14.0	8.7	5.5	13.4	8.2
Number of Banks						
Number	247	456	1,458	238	434	1,391
Rank	3	2	1	3	2	1
Owners' Equity						
Percent of Liabilities	7.3	8.3	6.9	7.9	8.3	7.1
Rank	2	1	3	2	1	3
Total Deposits						
Percent of Liabilities	90.6	90.2	91.2	89.7	89.8	91.1
Rank	2	3	1	3	2	1
Total Securities						
Percent of Assets	29.4	33.5	26.2	30.5	34.8	28.2
Rank	2	1	3	2	1	3
Net Loans						
Percent of Assets	49.5	47.0	47.6	50.5	46.1	46.7
Rank	1	3	2	1	3	2
Net Loans						
Percent of Deposits	62.5	53.1	60.6	63.4	54.2	57.5
Rank	1	3	2	1	3	2
Net Income						
Percent of Assets	0.2	0.4	-0.6	0.4	0.7	-0.2
Rank	2	1	3	2	1	3
Net Interest Margin						
Percent of Assets	3.8	4.1	3.7	4.4	4.2	3.9
Rank	2	1	3	1	2	3

The average Louisiana bank experienced an asset growth rate of -0.3 percent and a deposit growth rate of -0.7 percent, both of which were well below the rates experienced by the average bank doing business in Oklahoma. Details of these data appear in Table 2.

In summary, the average Oklahoma bank exhibited excellent strength, compared with the remaining two states in owners' equity both as this indicator relates to liabilities and to assets. Moveover, its portfolio appears to be safer in that securities comprise a bigger share of its assets than in banks in either Texas or Louisiana. Further, its net income to assets ratio is above those of average banks in the two remaining states and its net interest margin is second only to that experienced by the average bank in Louisiana. However, the continued lag in the loan to deposit ratio of the average Oklahoma bank tends to constrain its earning capabilities and its apparent service to its market area.

Performance-wise, the average Oklahoma bank sustained a larger rate of return on owners' equity and on assets than did the average bank in the two remaining states and also had a larger net profit margin. It performed reasonably well in terms of asset yield and the ratio of equity to assets and exhibited only moderate strength in earning assets and net loan yields but was well below the experiences of the average banks in Texas insofar as asset and deposit growth rates were concerned. The lag in the rate of deposit growth for the average Oklahoma bank can be attributed in part to the relatively slow growth in personal income—and its effect on the loan market—which was prevailed in the State during the past seven years to the increased diversion of funds by bank customers to nonbank investments.

TABLE 2

Average Bank Performance Ratios
Louisiana, Oklahoma and Texas
June 1989

	Louisiana	Oklahoma	Texas
Percent Return[a] on Equity	3.6	6.8	-6.4
Rank	2	1	3
Net Profit Margin	4.1	6.4	-2.4
Rank	2	1	3
Percent Return on Assets	0.4	0.6	-0.2
Rank	2	1	3
Percent Asset Yield	10.5	10.5	10.5
Rank	1	1	1
Percent Equity to Assets	9.1	9.5	8.3
Rank	2	1	3
Percent Equity Formation Rate	3.2	1.9	-0.8
Rank	1	2	3
Percent Earning Asset Yield	10.8	10.7	10.8
Rank	1	2	1
Percent Net Loan Yield	11.9	12.3	12.1
Rank	3	1	2
Percent Asset Growth	-0.3	0.3	0.8
Rank	3	2	1
Percent Deposit Growth	-0.7	0.1	1.1
Rank	3	2	1

[a] Net income return

TABLE 3

Average Bank Performance Ratios
All Oklahoma Banks versus High Performance Oklahoma Banks
June 1989

Performance Ratio	All Oklahoma Banks	High Performance[a] Oklahoma Banks
Percent Return on Equity	6.8	26.2
Percent Return on Assets	0.7	1.8
Percent Asset Yield	10.5	11.0
Percent Equity to Assets	9.5	8.6
Percent Equity Formation Rate	1.9	8.4
Percent Earning Asset Yield	10.7	11.1
Percent Net Loan Yield	12.2	12.6
Percent Asset Growth	0.3	1.5
Percent Deposit Growth	0.1	1.0
Net Profit Margin	6.5	15.8

[a] High Performance Banks are defined as the upper 20 percentile of banks based on the ratio of returns on equity ratios.

All Oklahoma Banks versus High Performance Banks

For the purpose of this study, high performance banks are the upper 20 percent of the banks in Oklahoma based on return on equity. In 1989, there were 10 banks which fell in this category of which only one was located in one of the State's four Metropolitan Statistical Areas. This suggests that, for the most part, the high performing banks are located in smaller communities throughout the State and thus have lower owners' equity levels which allows for higher *rates* of increase to occur. However, despite the fact that the average high performing bank is generally smaller than the average of all banks, its performance ratios are impressive. For example, where the average Oklahoma bank experienced a return on equity in 1988 of 6.8 percent, the average high performing bank showed a 26 percent return. In addition, the average Oklahoma bank experienced a 1.9 percent gain in equity formation whereas the average high performing bank increased equity by 8.5 percent. The average high performing bank also showed significantly greater growth rates in assets and deposits and, at the bottom line, had a net profit margin of 15.8 percent which was more than double the rate of the average Oklahoma Bank. Other rate and ratio comparisons are shown in Table 3.

Neil J. Dikeman, Jr. is Director for the Center for Economic and Management Research.

Money Magazine Errs

An article appearing in the January issue of *Money* Magazine which was focused on state and local tax burdens has received considerable attention by local press and electronic media. The article characterized certain states such as Alabama, Florida and New Hampshire as "tax havens" in contrast to other states such as New York and Hawaii as "tax hells." The feature of the article which received the most publicity was a table which ranked the states in terms of the magazine's definition of the tax burden of a typical family of four. One of the more notable aspects of this table (to an Oklahoman at least) was the fact that the tax burden of an Oklahoma family was computed to be above that of a similar family in Texas.

Because of the interest this article engendered among the states, State Policy Research, Incorporated, an organization which specializes in the analysis of policy questions such as taxation, investigated the methodology, assumptions and tax components upon which these rankings were based.[1] Their findings were first that the computations on which this table was based included only the sales taxes on food, clothing and the gasoline tax (which, in Oklahoma is an excise tax) but omitted the property tax as a part of the tax burden. This omission covers a significant element in the tax structure and in the cost of living. In addition, the *Money* article also assumed an average annual income for the family of $61,372 whereas, in Oklahoma, this average would have been more likely between $30 and $35 thousand. This difference in family income alone would have caused a significant decrease in the tax burden computed for Oklahoma residents. However, by merely including property taxes in the tax burden and without adjusting other taxes for income differences, the ranking of the tax burden in Oklahoma would have been reduced to 38th among the 50 states compared with a ranking of 31st for Texas. This adjustment reduced the Oklahoma tax burden to a level which is 21 percent below the average for all states.

In short, the omission of the property tax item and the unusually high income level attributed to the "average" family tended to hide many of the differences in the tax structure and burden shown for all states.

The corrections to the computations contained in the *Money* article are important because, in its present form the article is damaging in that many businesses which are considering expanding to or locating a facility in another state, consider taxes paid by their work force to be an extremely important location factor. Obviously, the data contained in *Money* would weigh heavily against Oklahoma as a location for a new or expanding business.

[1] See: "Comparing State Taxes and Spending," Issue 2, Volume 8, *State Policy Reports*, State Policy Research, Inc., 7706 Lookout Court, Alexandria, VA.

Oklahoma's Gross State Product: 1963-1986

GERALD M. LAGE
JOHN SHELNUTT

REGIONAL ECONOMIES HAVE historically been described by employment data from establishment or household surveys or monetary measures of personal income, worker compensation or earnings allocated to the major industries of the Standard Industrial Classification (SIC). Regional output measures, if available at all, were estimated by local research units based on more or less standard methodology published in the regional economics literature.

This situation changed with the May, 1988, issue of the *Survey of Current Business*, as the U.S. Department of Commerce, Bureau of Economic Analysis (BEA), released its estimates of Gross State Product for the years 1963 through 1986. For the first time, consistent estimates were available for all fifty states that totalled to relevant national income and product account concepts.

The purpose of this article is to analyze this new data base with a view toward measuring the extent of growth, structural change and diversification among the major economic sectors of the Oklahoma economy and among the individual industries comprising the Manufacturing sector. Data for more recent years have not yet been estimated.

Concepts and Overview of the Period

Gross State Product (GSP) is defined to be the gross market value of all goods and services attributable to the factors of production—labor and property—located in a state. Since returns from foreign business operations paid to U.S. residents are not relevant to states' production, the related national concept is Gross Domestic Product (GDP), rather than the more familiar and inclusive Gross National Product (GNP).

Conceptually, GSP can be viewed as the sum of payments to all factors of production as well as certain other costs of doing business such as indirect business taxes, capital charges and some forms of compensation not considered in labor earnings. Alternatively, GSP is the sum of value added in production by each economic unit. For business units, this would be sales plus inventory change, less purchases of materials and business services from other units. Estimation methodology varies for different sectors of the economy, but it is generally some combination of techniques based on these two alternative conceptualizations.

An illustration of differences caused by the use of Gross State Product estimates to measure economic activity rather than a major component only, say total compensation, may be observed in Table 1 reprinted from the *Survey of Current Business*, (May 1988), with additions for the State of Oklahoma. By either measure, total product or worker compensation, the relative economic loss of the nation's interior states was at least three percentage points from 1977 to 1986. As pointed out in the *Survey*, the relative economic decline of the interior regions from 1982 to 1986 was certainly dominated by the decline in regions dependent on energy-related mining. World oil price changes drastically affected the large producers by altering the value, as well as the volume, of domestic production and related economic activity.

As seen in the data for changes in the relative shares for the Southwest and Oklahoma for the subperiods of the 1977-86 period, the measurement of economy activity using value of output is subject to significantly larger variations than measurements of only the compensation component. During both the 1977-1982 "boom" and the 1982-1986 "bust," the changes in the all-industry gross regional product for the Southwest and Oklahoma exceeded the changes of the less inclusive measure of worker compensation.

TABLE 1

Gross State Product and Compensation as a Share of U.S. Total
All Industries
1967-1986

	Percent of U.S. Total				Percentage-point change in share of U.S. total		
	1967	1977	1982	1986	1967/77	1977/82	1982/86
Coastal Regions							
GSP	52.88	51.77	52.04	55.00	-1.11	0.27	2.96
Compensation	55.21	53.31	54.21	56.60	-1.90	0.90	2.39
Interior Regions							
GSP	47.12	48.23	47.96	45.00	1.11	-0.27	-2.96
Compensation	44.79	46.69	45.79	43.40	1.90	-0.90	-2.39
Southwest[a]							
GSP	7.27	9.43	11.50	10.26	2.16	2.07	-1.24
Compensation	6.71	8.33	10.23	9.41	1.62	1.90	-0.82
Oklahoma							
GSP	1.04	1.20	1.57	1.19	0.16	0.37	-0.38
Compensation	0.96	1.08	1.36	1.05	0.12	0.28	-0.31

Source: U.S. Department of Commerce, *Survey of Current Business*, May 1988, page 32.

[a] Region includes Texas, Arizona, New Mexico and Oklahoma.

Estimates of Gross State Product using the prices of the year of production are called "current-dollar" estimates. These estimates represent the ability to purchase and control the use of resources in the current year on the factor side and the value placed on current production on the demand side. Relative shares of nominal values are best suited to describe the state's ability to produce those products and services of greatest value in consumption, investment and trade and to adapt to the aggregate demands of society.

Estimates of production adjusted for price level changes relative to a base year, most frequently 1982 in current economic statistics, are called "constant-dollar" or "real" GSP estimates. These values more closely approximate volume changes and, over a short period with relatively constant productivity levels, command over physical units of resources. The estimates are frequently used to compare interregional trends in labor or total factor productivity or to project the volume of industrial activity.

An overview of the pattern of growth rates for Oklahoma, the Southwest Region[1] and U.S. economic activity using total GSP and total manufacturing product for various time periods and for both nominal and real growth is shown in Table 2. By point of reference, the years of peak economic output before a recessionary period during this time span are 1969, 1973 and 1979. These years (and any recent year for which data is available) provide convenient reference points for investigating relative shares since cyclical variations in the series are substantially accounted for.

The years from 1963-1973 were certainly ones of excellent absolute and relative growth for both Oklahoma and the Southwest. However, the next decade was even more favorable with real growth in the region nearly double the national average in the aggregate and nearly three times as rapid for real manufacturing output. Unfortunately, the 1982-1986 reversal of these trends was equally dramatic, especially for total state product in Oklahoma which averaged a *loss* of one percent per year in real terms. Note, however, that despite several years of divergent growth patterns, over the long run period from 1963 to 1986, state, regional and national growth rates show Oklahoma lagging a bit behind the region as a whole and staying somewhat ahead of the national averages when measured in total product.

The Manufacturing sector, especially, has made substantial relative advances in both the state and the region, but partly at the expense of absolute decreases in manufacturing output in other regions of the nation.

Considering the entire period from 1963 to 1986 covered by the new BEA estimates, the average annual growth rates (from semi-log linear regressions) illustrate the relative prosperity of the Southwest over the state and both of these regions over the nation as a whole. Oklahoma's GSP growth rate averaged over 10 percent per year in nominal terms, about one percentage point less than the entire Southwest regional average but 1.5 percentage points above the national rate.

Oklahoma Aggregate GSP Trends

The Department of Commerce estimates that Oklahoma Gross State Product measured in current dollars grew from $6.4 billion in 1963 to nearly $50 billion by the mid-1980s. The Gross Domestic Product of the nation grew from $600 billion to over $4 trillion. Since such figures have little meaning without a frame of reference, analysis of these growth patterns will be conducted in terms of distributive shares of the components of GSP and growth rates of regional and national industrial output.

Based on these new GSP estimates, Oklahoma's period of phenomenal growth can be dated from 1967 through 1982, a period in which the year-by-year growth rate in Oklahoma always matched or exceeded the U.S. increase in Gross Domestic Product. Toward the end of the period, 1979 through 1982, the state growth also exceeded the Southwest regional average as well. (See Figure 1.)

Relative growth patterns may also be inferred by observing the ratios of Oklahoma's product relative to regional and national aggregate production as described in Table 1. The state's share

TABLE 2

Comparative Growth Rates of Total Product and Manufacturing Output
Oklahoma, Southwest and the U.S.
Current and Constant (1982) Dollars
1963-1986

	Nominal Gross Regional Product			Nominal Gross Manufacturing Product		
	Oklahoma	Southwest (percent)	U.S.	Oklahoma	Southwest (percent)	U.S.
1963-1973	8.5	9.1	7.8	10.0	8.7	6.8
1973-1982	13.6	13.7	9.9	12.8	12.9	8.5
1974-1982	14.0	13.8	10.1	13.1	12.8	8.6
1980-1986	3.9	6.4	7.5	4.2	5.6	6.0
1982-1986	1.1	5.3	7.7	3.4	5.7	6.8
1963-1986	10.4	11.2	8.9	10.5	10.3	7.2
1970-1980	12.3	13.3	10.0	12.4	12.8	8.9

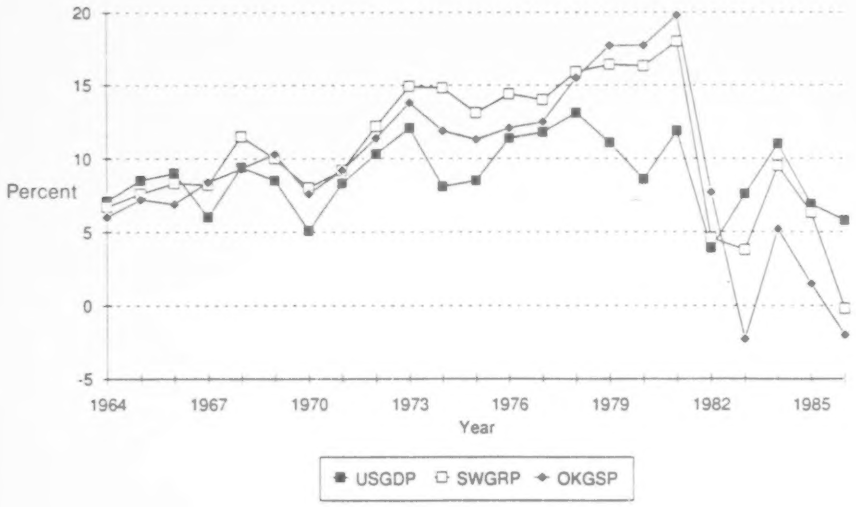
In 1982 dollars:	Real Gross Regional Product			Real Gross Manufacturing Product		
	Oklahoma	Southwest (percent)	U.S.	Oklahoma	Southwest (percent)	U.S.
1963-1973	3.5	4.3	3.4	6.5	5.8	3.4
1973-1982	3.7	4.1	2.1	5.3	5.5	1.6
1974-1982	4.1	4.2	2.3	5.8	5.6	2.0
1980-1986	0.1	2.3	3.0	2.3	3.1	3.9
1982-1986	-1.0	2.7	4.5	4.2	5.3	6.5
1963-1986	2.8	3.9	2.7	5.2	5.2	2.6
1970-1980	2.9	4.4	2.8	5.6	6.2	3.0

Source: U.S. Department of Commerce, Bureau of Economic Analysis, data tapes.
AAPC = Average Annual Percentage Change, semilog regressions.

FIGURE 1

Gross Product; U.S., Southwest and Oklahoma

Annual Growth Rates



of national output rose sharply from just over one percent of GDP in 1966 to a peak of over 1.5 percent in 1982 before falling back again to only 1.2 percent in 1986. Relative to the Southwest region, Oklahoma's share slowly fell over the entire period to 1979, and then it rose only marginally through 1984 before plunging to a new historical low in 1986.

The "golden age" for recent state growth, if indeed one wishes to use such a descriptor, would obviously best describe the decade and a half from the mid-1960s through the 1970s. This fact is, of course, well known. The new data simply confirm how advantageous the particular constellation of economic factors were for state economic growth.

Trends in the Output of Oklahoma's Economic Sector

The changing distribution of relative shares of major goods-and services-producing sectors in nominal GSP reflects the ability of the state economy to adapt to changing patterns of demand and comparative advantage. The major stories in Oklahoma over the two decades of the GSP series are the rapid growth of services in the economy, the continued erosion of the relative value of Agriculture, Forest and Fishery output, the growth and decline of the Mining sector and the slow and somewhat erratic climb of Manufacturing. (See Table 3.) For comparative purposes, the relative shares of the major sectors are also reported in constant, 1982 dollars to provide an alternative indication of physical volume of output by adjusting the market value of output with a national price index as a deflator.

The single sector designated as "Services," including the activities related to health, business and professional services, has seen rapid and steady growth throughout the period under discussion. Oklahoma began the period with just over 9 percent of state product in this sector, a level 1.4 percentage points below the national average, and ended the period with a state share of 13.1

percent. That amount, however, is still 3.6 percentage points below the national average. A similar pattern of below average state shares, but more constant ratios and slower growth, tends to hold for the Wholesale Trade and Finance, Insurance and Real Estate Sectors. The remaining service-producing sectors—Retail Trade, Transportation, Communication and Public Utilities and Government are somewhat more important locally, as well as more constant as a proportion of the relevant total product.

The direct market value of the output of Oklahoma's Mining sector, which is almost exclusively oil and natural gas production, rose from an already substantially-above-average 13.4 percent share of the state economy to an astounding 20 percent at the peak of economic activity in 1982. The share has since fallen back to 10 percent with production and price declines, but even that share is still four times as high in Oklahoma as the U.S. average and in the traditional range of 1-2 percentage points higher than the Southwest average.

The relative importance of Mining output in constant dollar, real output terms is even much more striking. The 20 percent of output in actual dollars of the 1982 base year is a very substantial *decline* from the 30 percent share in 1963 as a result of both production declines and price increases. The 1982 to 1986 decline in value from 20 to 10 percent of current dollar Oklahoma output compares to the decline in output by volume from 20 to only 15 percent of real GSP.

The current dollar share of state output accounted for Agriculture, Forestry and Fishing declined from 5.4 percent in 1963 to 3.6 percent in 1986. That amount remains about 1.5 percentage points above the national share of 2.2 percent; which, by itself, was a substantial decline from the 3.7 percentage point share of U.S. GDP in 1963. In

TABLE 3

Gross Regional Product Distributive Shares 1963-1986

	United States Gross National Product (percent)					Southwest Gross Regional Product (percent)				
	1963	1972	1977	1982	1988	1963	1972	1977	1982	1988
Gross State Product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, Forestry and Fishing	3.7	3.1	3.0	2.9	2.2	4.7	3.5	2.9	2.5	2.2
Mining	2.2	1.7	2.6	4.3	2.3	11.8	7.7	10.9	16.4	9.3
Construction	4.8	5.3	5.0	4.5	4.7	5.1	6.1	6.8	5.9	5.9
Manufacturing	28.1	24.4	23.8	20.4	19.7	16.7	16.8	17.2	14.8	15.1
Transportation, Communication & Public Utilities	9.2	9.0	9.1	9.3	9.4	10.6	9.9	9.4	9.5	10.6
Wholesale Trade	6.7	7.0	7.1	7.1	7.0	6.5	7.1	6.9	7.1	7.0
Retail Trade	9.7	10.0	9.9	9.3	9.7	9.9	10.3	9.9	8.7	9.6
Finance, Insurance & Real Estate	14.4	14.6	14.3	15.3	16.6	13.3	13.8	13.0	12.6	14.0
Services	10.6	12.1	12.9	14.9	16.7	9.7	11.2	11.2	12.0	14.5
Government	10.6	12.8	12.3	12.0	11.7	11.7	13.6	11.8	10.5	11.8

	Oklahoma Gross State Product Current Dollars (percent)					Oklahoma Real Gross State Product 1982 Dollars (percent)				
	1963	1972	1977	1982	1988	1963	1972	1977	1982	1988
Gross State Product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, Forestry and Fishing	5.4	5.1	3.5	4.0	3.6	4.0	3.7	2.5	4.0	4.4
Mining	13.4	8.7	12.2	19.9	10.4	30.8	27.4	21.9	19.9	14.6
Construction	4.8	5.1	5.7	4.7	4.3	7.3	5.0	5.8	4.7	3.9
Manufacturing	12.9	15.1	15.6	13.0	14.3	9.0	11.7	13.3	13.0	15.8
Transportation, Communication & Public Utilities	10.8	11.0	9.4	8.9	10.5	7.0	8.9	8.8	8.9	9.5
Wholesale Trade	6.5	6.4	6.5	6.5	6.1	4.2	5.1	5.7	6.5	6.4
Retail Trade	10.1	10.4	10.4	8.6	9.9	7.3	7.8	8.9	8.6	9.5
Finance, Insurance & Real Estate	13.3	12.6	12.0	12.1	13.5	9.0	9.5	10.9	12.1	12.0
Services	9.2	10.3	11.1	10.5	13.1	7.8	8.6	10.2	10.5	11.5
Government	13.6	15.3	13.6	11.8	14.3	13.6	12.3	12.0	11.8	12.4

volume terms, this natural resource sector has contributed a more steady 4 percentage point share of the physical volume of state output over the period.

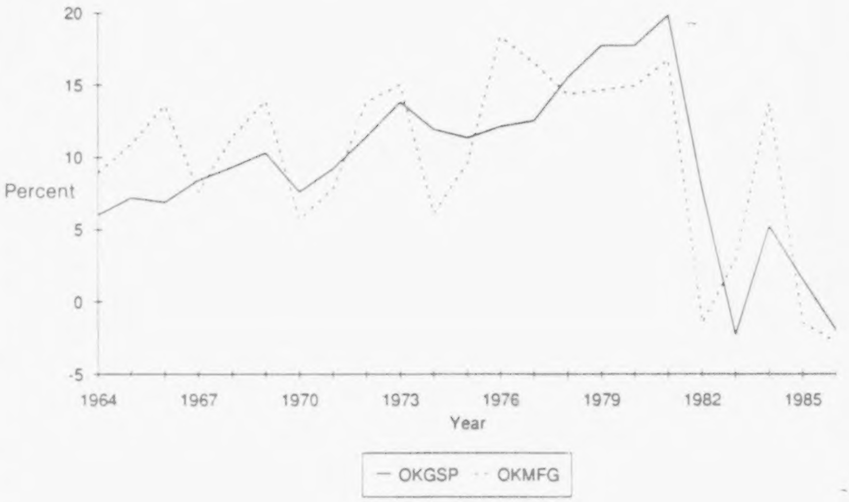
Finally, among the goods-producing sectors, Manufacturing in Oklahoma displays a substantial growing trend through the 1960s and early 1970s. The price-adjusted manufacturing picture reveals an almost doubling of the physical volume of manufacturing output along a steady growth path from 1963 to 1986. Such a pattern is consistent with substantial productivity gains in manufacturing which allow more output with relatively slower growing inputs and product prices.

Construction, too, shows a pattern of a fairly constant share of output in value terms, but a substantial decrease in relative importance in real or volume terms.

In comparison to the national pattern, Oklahoma's relative concentration of output remains most pronounced in the natural resource areas of Agriculture and Mining and in Government services. The Manufacturing sector has had the greatest movement toward the national average. The state is much more similar to the Southwest region, however, Agriculture, Mining and Government still retain above average concentrations even in the region.

FIGURE 2

Oklahoma GSP and Manufacturing Growth Rates



Trends in GSP of Oklahoma Manufacturing Industries

The Manufacturing sector of Oklahoma managed to maintain a growth pattern exceeding the national manufacturing average for the entire period from 1963 to the peak in mid-1982. It also exceeded the growth rates for total GSP during most years of that period. (See Figure 2.) Year-by-year the percentage growth in state Manufacturing outpaced national Manufacturing and the state share of that aggregate doubled from just under one-half of one percent to just over one percent before falling back to levels of the last decade. The growth pattern was similar to the other three states of the Southwest region—Texas, Arizona and New Mexico—so Oklahoma's regional contribution remained within the band of 11.0 to 12.5 percent of the total. Using semilog trend regressions for estimation, average annual growth from 1963-1986 for Manufacturing in the U.S. was 7.2 percent; in the Southwest, 10.3 percent; and, for Oklahoma, 10.5 percent. Moreover, the series of annual growth rates for state manufacturing product, like the national and regional counterparts, exhibits considerably more variation than total GSP or the service-producing sectors.

Looking at the relative share columns of the data in Table 4 (the second and third data columns), a picture of quite extreme state concentration in a few industries becomes evident. Compared to industry-by-industry shares in total national manufacturing output, Oklahoma Manufacturing is most heavily concentrated in just three industries—Petroleum products, Rubber and plastic products and Stone, clay and glass products. Perhaps surprisingly, the shares of the large aggregate Durable goods and Nondurables goods categories are virtually equal to the national shares. Many industries, on the other hand, appear to be considerably below the national average as determined by a broad range of competitive advantages in other parts of the country.

Within the Southest region, Oklahoma's concentration on durable goods production becomes apparent with relative concentrations in Motor vehicles and parts, Nonelectrical machinery, Fabricated metal products and the Stone, clay and glass products. Nondurable industries of regional concentration are Rubber and plastic products, Textile mill products and Paper and paper products.

The pattern of Oklahoma industrial growth over the two decades is broadly defined in terms of increasing importance of the durable goods production. The share of such goods in state Manufacturing output rose from 53 percent in 1963 to 61.5 percent in 1972 and then reversed somewhat to 57.4 percent in 1986. The share of the large Nonelectrical machinery industry rose from 12.0 percent of manufacturing output in 1963 to 17 percent by 1986 (nearly 20 percent at its peak). Motor vehicle production likewise grew extremely fast as shown by the rise in its output share from 2.2 percent to 6.7

percent over the period. However, the decline in the Primary metal products and Fabricated metal products industries was almost as rapid.

The output patterns among the Nondurable goods sector show major changes in the growth of the Rubber and plastic products sectors (especially the Tires and inner tubes component), the Paper and paper products industries and, to a smaller extent, the Chemical products industries. The analytically offsetting relative declines are most substantial in the Food products sector where the share of state Manufacturing output fell from 13.3 percent to 6.2 percent and Petroleum refining where the output share fell from 18.3 to 13.9 percent between the end points of the period.

The Question of Diversification

With the growth and change observed in state, regional and national economies since the initial date of the estimates in 1963, it is natural to wonder whether the Oklahoma economy has become more or less diversified as a result. Unfortunately, that concept is not uniquely defined and some intuitive notion must be used to guide any empirical measurement.

The concepts of diversification most often encountered refer to either a more uniform distribution of economic activity among and within major sectors of the economy or a movement toward some external distribution used for comparison.[2] Given the natural resource base of the state economy in the early 1960s, the choice of an external comparison to the national economic structure would appear to be a reasonable choice, while recognizing that identical structures would not be optimal either.

The index of diversification used here is defined as the sum of the absolute differences in shares of corresponding Oklahoma and U.S. (or Southwest) economic sectors or industries. If comparative economies are proportionally identical the index is zero, and if each is completely specialized (absolute concentration) in a different single sector the index is equal to the value two (2). Thus, a reduction of the index over time indicates smaller differences between shares. In this application the change is interpreted as a movement toward diversification.

Indices of diversification have been computed for both the aggregate GSP (using the 10 economic sectors as data) and manufacturing (using the 20 industrial breakdowns of Table 4) and with both the Southwest and U.S. economic structures as bases of external comparison. These data are shown in Figures 3 and 4.

The clearest conclusion of the diversification calculations is the existence of a trend toward diversification of the Oklahoma economy, in the sense of becoming more like the national economy, from the start of the period in 1963 through the mid-1970s. However, with the substantial structural changes following the oil price increases in 1973 and again in 1979, the economy again reverted toward historical resource-based patterns, at least until the national recessions of 1981-82. The index value that fell by 18 percent from 1963 to 1973 rose again by 13 percent from 1973 to 1982. Very little trend movement in the index using the regional external comparison is evident in either series.[3]

While no firm conclusion can be reached regarding diversification accompanying economic change, the impression that is left by examining more detailed data is one of a shifting source of state concentration rather than any

TABLE 4

Oklahoma Gross Manufacturing Product by Industry
1963-1986 Selected Years
Current Dollars

	Oklahoma 1986 GSP ($ mil.)	1986 Relative Shares OK/US (ratio)	1986 Relative Shares OK/SW (ratio)	Distributive Shares 1963 (percent)	Distributive Shares 1972 (percent)	Distributive Shares 1982 (percent)	Distributive Shares 1986 (percent)
MFG	7,110	1.00	1.00	100.0	100.0	100.0	100.0
DUR	4,079	0.99	1.06	52.9	61.5	58.2	57.4
NDU	3,031	1.02	0.93	47.1	38.5	41.8	42.6
MNE	1,199	1.62	1.45	12.0	16.7	19.7	16.9
PET	990	2.95	0.95	18.3	12.1	14.1	13.9
RUB	629	2.69	2.82	4.5	5.5	8.0	8.8
FMP	549	1.12	1.28	9.0	10.2	11.5	7.7
SCG	486	2.23	1.38	9.1	7.1	5.6	6.8
ST1-5	3,853	—	—	52.9	51.6	58.8	54.2
MVE	473	1.11	3.25	2.2	3.2	2.0	6.7
FDP	444	0.72	0.79	13.3	8.3	6.5	6.2
EEE	422	0.55	0.55	5.6	9.1	7.2	5.9
OTE	372	0.79	0.72	5.5	5.4	4.2	5.2
PRT	365	0.78	0.97	5.4	4.7	4.7	5.1
ST6-10	2,076	—	—	32.0	30.8	24.6	29.2
CHE	235	0.42	0.31	1.6	1.3	3.8	3.3
PAP	208	0.69	1.40	1.2	2.0	2.3	2.9
INS	183	0.67	1.05	1.0	1.0	2.5	2.6
PMP	172	0.57	0.68	4.5	3.3	2.7	2.4
APL	129	0.72	0.95	2.3	3.1	2.0	1.8
MIS	88	0.73	0.82	1.1	1.9	0.9	1.2
LUM	88	0.41	0.45	2.2	2.8	1.3	1.2
FUR	48	0.42	0.76	0.7	0.8	0.7	0.7
TEX	27	0.17	1.29	0.1	1.2	0.3	0.4
LEA	4	0.16	0.27	0.1	0.3	0.1	0.1

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

MFG = Manufacturing
MNE = Nonelec. machinery
FMP = Fabricated metal
FDP = Food products
PRT = Printing/Pub.
INS = Instruments
MIS = Misc. products
TEX = Textile products
DUR = Durables
PET = Petroleum pro.
SCG = Stone, clay & glass
EEE = Electric equip.
CHE = Chemicals
PMP = Primary metals
LUM = Lumber products
LEA = Leather products
NDU = Nondurables
RUB = Rubber and plastics
MVE = Motor vehicles & parts
OTE = Other trans. equipment
PAP = Paper products
APL = Apparel products
FUR = Furniture

FIGURE 3

Diversification Index, Gross Product

Index = Sum of Absolute Differences in Relative Shares of Component. See Text.

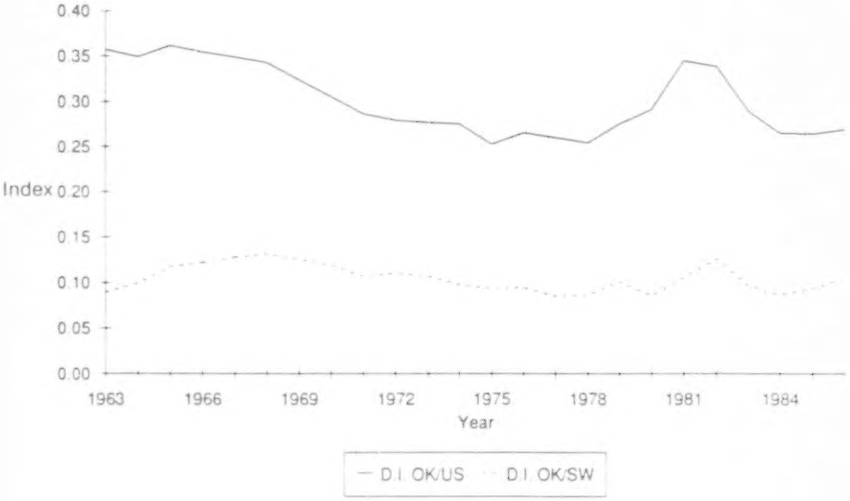
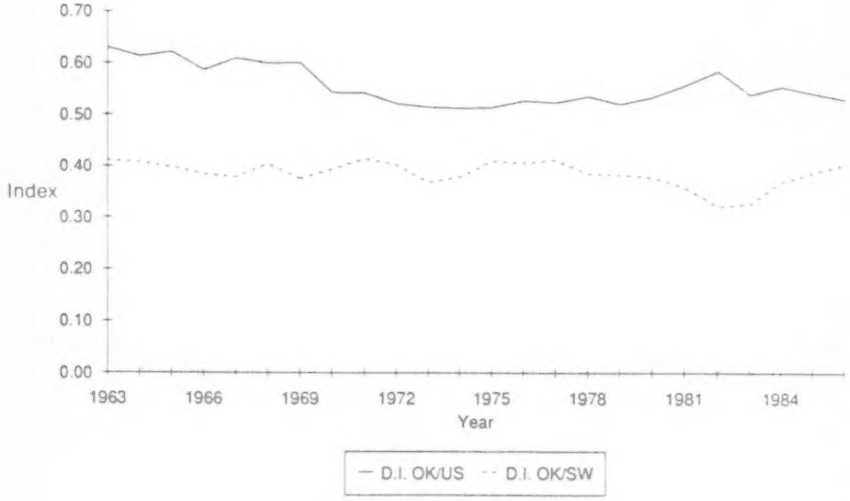


FIGURE 4

Diversification Index, Manufacturing Product

Index = Sum of Absolute Differences in Relative Shares of Component. See Text.



reduction in the extent of the concentration of economic activity.

Notes

[1] Defined here as Oklahoma, Texas, Arizona and New Mexico.

[2] H.L. Brewer and Ronald L. Moomaw, "A Note on Population Size, Industrial Diversification, and Regional Economic Instability," *Urban Studies* (1985) 22, pp. 349-354.

[3] Using a statistical concept of diversification from portfolio analysis, researchers for the Federal Reserve Bank of Dallas find that "In the 1970s, growth of the energy industry reduced the diversity of the Texas economy. Since 1979, however, growth of other industries, particularly those producing services, has increased the state's economic diversity. A declining energy industry also contributed to diversification in the 1980s." William C. Gruben and Keith R. Phillips, "Diversifying Texas: Recent History and Prospects," *Economic Review*, Federal Reserve Bank of Dallas, July 1989. While substantial differences exist between the Texas and Oklahoma economies, the implications of this study from the dominance of the energy industry in the 1970s would point toward a likely reversal of the trend toward diversification in the Oklahoma economy during this period as well.

Gerald M. Lage is Professor of Economics at Oklahoma State University and John Shelnutt is Division Director for Regional Economics Analysis at the University of Arkansas at Little Rock.

Using a Decision Support System To Manage Exchange Rate Risk

MARK G. SIMKIN
NANCY A. BAGRANOFF
PEGGY J. CRAWFORD

Introduction

THE BUYING AND SELLING OF goods and services in international markets introduces to business decision-makers the problem of transacting in foreign currencies. When domestic importers and exporters conclude contracts payable in foreign currencies an uncertain price is effectively agreed upon regardless of what is stated in the contract. This uncertainty is caused by fluctuations in the rate of exchange between the currencies of different nations over a period of time. In the past seven years multinational companies have faced particularly volatile financial markets (Sesit, 1986). The uncertainty of volatile currency markets can be reduced by hedging or by purchasing contracts calling for the future delivery of the appropriate currency at a stated price. Hedging, however, may be costly in terms of both transactions fees and the lost opportunity to take advantage of favorable exchange rates.

Managing currency exchange rate risk essentially involves the decision of whether or not to hedge against rate fluctuations. There are several variables to consider in making this decision and the assignment of priorities for these variables is subjective. Semi-structured problems of this nature can be approached with automated decision tools, Decision Support Systems. This article illustrates the use of a particular Decision Support System, an automated version of T.L. Saaty's Analytic Hierarchy Process applied to the management of currency exchange risk (Saaty, 1982).

The Decision Support System

Decision Support Systems are interactive computer programs designed to help managers make decisions in complex environments where variables are difficult to define and subjective judgment is necessary. A Decision Support System which has proved valuable in this sense is *Expert Choice*, a software package developed by Decision Support Software in McLean, Virginia (Decision Support Software, 1983). *Expert Choice* is essentially an automation of the Analytic Hierarchy Process (AHP).

The AHP is a technique for structuring complex problems in a hierarchy and determining priorities for decision variables. The top level of the hierarchy consists of the goal and lower levels consist of factors, criteria, stakeholders and/or alternatives, depending on the particular problem at hand. The elements of each level are evaluated on a pairwise comparison basis, considering their relationship to a particular element in the level above. For example, if the problem is to decide whether or not to accept a particular job, the goal or top level of the hierarchy would be to make the best career decision. The second level of the hierarchy might consist of criteria such as salary, opportunity, personal satisfaction, etc. These criteria are compared with each other on a pairwise basis and evaluated. For example, the importance of salary relative to personal satisfaction in determining the best career choice is indicated by the decision-maker. The third level would then consist of job alternatives and Job A is compared pairwise with Job B and C relative to salary, opportunity and personal satisfaction. The comparison process at each level yields local priorities through matrix algebra. Mathematical computations can be performed manually or by using *Expert Choice*. Global-(with respect to goal) priorities are also calculated, which results in a ranking. In this example, the ranking indicates the best job choice. The consistency of individual judgments is also measured and tested. This provides some feedback regarding the validity of the decision-makers' responses.

Managing Exchange Rate Risk

Since the early 1970s, a managed floating exchange rate system has existed between the currencies of most nations. That is, the exchange rate between most currencies is set by supply and demand for the currencies in the market place. The float is managed in that Central Banks may step in to smooth large fluctuations and minimize shocks to the world economy.

What the managed floating currency standard means to importers and exporters is that rates can change quickly and in both directions. Table 1 shows foreign currency exchange rates for 1984 - 1986 and the first four months of 1987.

The volatility of exchange rates dictates that firms going through international currency markets can be hurt or helped by exchange rate changes. For example, if the value of the domestic currency goes up relative to the foreign currency, the importer of goods and/or services will benefit since it takes less of the domestic currency to buy the foreign currency needed to pay the contract price. However, exporters of goods and/or services will be hurt since the foreign currency needed to pay for the products will convert into less of the domestic currency. The opposite will occur if the value of the domestic currency decreases. This is called exchange rate risk, and to minimize exchange rate risk, forward market in foreign currencies developed. The forward rate is the exchange rate of the foreign currency to be delivered 30, 60, 90 or 180 days in the future. The forward rate reflects all anticipated changes in the exchange rate between the two currencies, but it allows the buyer to purchase insurance against any unanticipated changes in the exchange rate. This insurance is called hedging and may be costly, particularly in terms of opportunity cost where exchange rate fluctuations prove to be favorable to the buyer. In a study of 187 multinational companies, in fact, Stobaugh found that companies with sales under $100 million were very likely to overcompensate for potentially negative exchange rates (Stobaugh, 1972). Stobaugh also found that in many instances, the conservative attitude of the treasurer or decision-maker accounted for this hedging behavior much more than any company policy.

To demonstrate this problem, consider the SBC Corporation, a hypothetical company that has just entered an agreement to purchase computer equipment from a Japanese supplier and to pay 10,000,000 yen for it. Payment will be made in approximately three months upon delivery. The importer may choose to buy yen in the forward market now (hedge) at an assumed forward rate of 150 yen to the U.S. dollar. Alternatively, the importer may choose to take the exchange rate at the time of delivery. If the exchange rate is 145 at time of delivery (in three months), the decision to hedge is a good one as long as hedging costs are less than $2,299 ($66,667 versus $68,966). However, if the exchange rate is 155 at time of delivery, the decision to hedge has an opportunity cost of $2,151 ($66,667 versus $68,966) in addition to hedging costs. For this reason, it is important for firms engaged in international business to attempt to predict unanticipated changes in the exchange rate in order to make informed decisions in risk management.

Illustration

The management of exchange rate risk involves choosing among two alternatives, to hedge (purchase a forward contract) or not to hedge. This choice is made by guessing at what the exchange rate will be at the time the appropriate currency is necessary. This guess is a subjective assessment of the likelihoods of future unanticipated events which would affect currency values. It is similar to guesses made about future interest rates in that there are many variables to consider and assigned probabilities are a function of the particular decision-maker's beliefs.

There are several types of decision models available for this type of decision. For example, a decision tree incorporating expected values of assigned

TABLE 1

Foreign Exchange Rates of Selected Countries
(currency units per dollar)

Country/Currency	1984	1985	1986	1987 Jan.	Feb.	Mar.	April
Australia/dollar	87.94	70.03	67.09	66.09	66.77	68.17	71.19
Brazil/cruzeiro	1,841.50	6,205.10	13.05	15.58	18.08	20.56	22.59
Canada/dollar	1.30	1.37	1.39	1.36	1.33	1.32	1.32
China, P.R./yuan	2.33	2.94	3.46	3.73	3.73	3.73	3.73
France/franc	8.74	8.98	6.93	6.20	6.08	6.11	6.03
Germany/deutsche mark	2.85	2.94	2.17	1.86	1.82	1.84	1.81
Hong Kong/dollar	7.82	7.79	7.80	7.77	7.80	7.80	7.80
Japan/yen	237.45	238.47	168.35	154.83	153.41	151.43	143.00
Sweden/krona	8.27	8.60	7.13	6.62	6.50	6.42	6.32
United Kingdom/pound	133.66	129.74	146.77	150.54	152.80	159.23	162.99

Source: Board of Governors of the Federal Reserve System. *Federal Reserve Bulletin*. Washington, D.C.: July 1987, p. A68.

priorities and varying exchange rates may be used. Alternatively, a minimax strategy may be used where the decision-maker identifies the worst outcome for each decision alternative and then chooses the least harmful of these worst cases. These types of decision models may not be optimal or efficient, however, since the decision-maker is required to assign weights or priorities to a number of ill-defined variables. This system also can be cumbersome to implement manually although use of electronic spreadsheets can facilitate the process.

The AHP as automated in *Expert Choice* offers many advantages over other multiple attribute decision tools. Two important ones are first, the required structuring of a problem into a hierarchy which allows the decision-maker to consider carefully the elements of the decision and second, the use of pairwise comparison process to establish priorities. The pairwise comparison process avoids the direct assigning of probabilities or likelihoods to elements, instead allowing them to be assigned indirectly by comparing each element with every other.

To illustrate how this Decision Support System might be used to make a decision about exchange rate risk, the problem is first arranged into a hierarchy. This particular hierarchy has three levels: the *goal* (to predict the future exchange rate), the *criteria* (variables which cause changes in exchange rates) and *alternatives* (various likely future exchange rates). Using *Expert Choice*, the decision-maker builds the hierarchy in an interactive mode on a computer. Inputs to *Expert Choice* in response to queries about this hierarchy will result in a prediction, based on detailed judgments by the decision-maker, of the priorities or likelihoods of the alternative exchange rates. The decision to hedge can then be based on this information.

Identification of the variables comprising the second level of this hierarchy may well be the most difficult step. Many variables, ill-defined by nature, are thought to influence exchange rates. Moreover, these variables may be different, depending on environmental factors, such as the countries involved and the status of foreign markets. The AHP is a flexible tool which can accommodate changes in variables easily for different decisions. To keep this illustration simple, four variables or criteria have been selected. These are the Balance of Payments position (BOP), speculation over future currency values (SPEC), domestic economic and political conditions (DPCOND) and Central Bank intervention (INTERVEN). The lower level of the hierarchy consists of various exchange rates. For this illustration, the yen is chosen. Possible alternative rates at some future date are 145, 150, 155 and 160. This hierarchy is shown in Figure 1, an *Expert Choice*, printout.

Once the hierarchy for the problem is structured, the next step is to evaluate the elements at each level. *Expert Choice* allows the decision-maker to evaluate a pair of variables in terms of likelihood, preference or importance. In this illustration, criteria are compared based on the importance of one versus another in predicting future rates. For example, the decision-maker indicates the relative importance of Balance of Payments (BOP) position versus future speculation (SPEC) in determining rates. In turn, each variable is compared with every other variable with choices indicating a range of equal importance to strongly more important. Pairwise comparisons then are made at the third level of the hierarchy. The different exchange rates are evaluated in terms of their likelihood based on the decision-maker's beliefs about the particular criterion considered. For example, the decision-maker may believe that the deficit in the Balance of Payments between the United States and Japan will continue to grow which would indicate the likelihood that the dollar will buy fewer yen in the future. Or, if the decision-maker predicts political uncertainty in Japan caused by upcoming elections, the likelihood that

FIGURE 1

To Predict the Future Exchange Rate

Goal
L = 1.000
G = 1.000

BOP	SPEC	DPCOND	INTERVEN
L = 0.176 G = 0.176	L = 0.075 G = 0.075	L = 0.574 G = 0.574	L = 0.176 G = 0.176
145 L = 0.467 G = 0.082	145 L = 0.095 G = 0.007	145 L = 0.068 G = 0.039	145 L = 0.346 G = 0.061
150 L = 0.277 G = 0.049	150 L = 0.160 G = 0.012	150 L = 0.144 G = 0.083	150 L = 0.346 G = 0.061
155 L = 0.160 G = 0.028	155 L = 0.277 G = 0.021	155 L = 0.221 G = 0.127	155 L = 0.209 G = 0.037
160 L = 0.095 G = 0.017	160 L = 0.467 G = 0.035	160 L = 0.567 G = 0.325	160 L = 0.098 G = 0.017

L = Local Priority G = Global Priority
145 = Yen Exchange Rate 150 = Yen Exchange Rate
155 = Yen Exchange Rate 160 = Yen Exchange Rate
BOP = Balance of Payments Position
DPCOND = Domestic Economic and Political Conditions
INTERVEN = Central Bank Intervention
SPEC = Speculation Over Future Currency Values

a dollar will buy more yen in the near future increases.

To show *Expert Choice* derives priorities from the pairwise comparisons, the results of the authors' judgments are included in Figure 1. The L refers to local priority and G refers to global priority. The AHP uses matrix algebra to calculate the local priorities based on the judgments made. The local priorities at each level add to one. The local priority for each variable is multiplied by the local priority for the variable it is related to in the level above, to obtain the global priority. For example, the local priority for the relative importance of Balance of Payments position (BOP) in predicting the future exchange rate is .176 or 17.6 percent. Since the authors' judgment is due to the expected Balance of Payments position then the exchange rate of 145 yen to the dollar is most likely (local priority of 46.7 percent) and the overall of global priority for this exchange rate is .082 (.176 times .467).

Global priorities are then summed (in this example each possible exchange rate is related to each criterion) and overall priorities for each alternative are obtained as shown in Figure 2. Again, referring to our example, the global priorities for the exchange rate of 145, under each alternate criteria, are .082, .007, .039 and .061. These sum to a total likelihood of .189 for this exchange rate. The prioritization of these exchange rates shows the order of likelihood based on a consideration of the criteria. Managers can use the most likely exchange rate as the basis for their decision to hedge or not to hedge.

FIGURE 2

To Predict the Future Exchange Rate (leaf nodes sorted by priority)

Overall Inconsistency Index = 0.04

160	0.394
155	0.213
150	0.204
145	0.189
	1.000

Note: A second output from Expert Choice, showing global likelihoods for the currency exchange rates of Figure 1. Managers can use this output to help them decide whether or not to hedge in the futures market.

Multiplying the priority times the rate itself also derives an expected value and managers may choose to use this method. In this way, *Expert Choice* becomes a valuable decision tool for foreign exchange risk management.

Conclusions

The purpose of this article is to show how a Decision Support System can be used to make complex decisions in the area of exchange rate risk management. The assumption underlying this effort is that prediction of changes in rates, based on a detailed consideration of variables, allows the decision-maker to make the best decision regarding hedging. In the long run, this technique should help to minimize losses (or take advantage of profits) due to fluctuating exchange rates. *Expert Choice* is particularly valuable for this application since it allows the decision-maker to consider the relationships among the predictive variables.

Other applications in the area of foreign exchange are possible. Fluctuating rates make risk management even more complex for multinationals who are almost constantly in and out of various foreign exchange markets. For purposes of illustration, this article considered the simpler problem of exporters and importers looking to minimize loss on future contracts. Future research in this area can investigate other scenarios where Decision Support Systems and Expert Systems can be of use.

References

Decision Support Software. *Expert Choice.* McLean, Virginia: Decision Support Software, (1985).

Rose, Peter S. *Money and Capital Markets.* Plano, Texas: Business Publications, Inc., (1986): 784-785.

Saaty, Thomas L. *Decision Making for Leaders.* Belmont, California: Lifetime Learning Publications, (1982).

Sesit, Michael R. "Dollar's Drop Helps Most Multinationals." *The Wall Street Journal,* (September 3, 1986): 6.

Stobaugh, R. *Money in the Multinational Enterprise: A Study of Financial Policy.* New York: Basic Books, (1972).

Mark Simkin is Professor of Information Systems at University of Nevada, Reno; Nancy Bagranoff is Assistant Professor of Accounting at American University; and Peggy Crawford is Associate Professor of Finance at George Mason University.

U8130-1.1

OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF OKLAHOMA

CONGRESSIONAL INFO. SERVICE/SRI
ATTN: ROBERTA B. MASON
4520 EAST-WEST HIGHWAY
BETHESDA MD 20814

ISSN 0030-1671

April 1990

VOL. 58, ISSUE 4

SUMMARY OF INDICATORS

Category	Jan. '90	Jan. '89	Dec. '89	Percentage Change Jan. '90/'89	Percentage Change Jan. '90/Dec. '89
Personal Income (Monthly Average)					
Unadjusted ($000,000)	3,982	3,709	3,960	7.4	0.6
Adjusted for CPI ($000,000)	3,126	3,063	3,140	2.0	-0.4
Crude Oil Production (000 bbl)[a]	8,563	9,862	8,235	-14.2	4.0
Natural Gas Production (000 mcf)[a]	101,117	173,431	147,445	-41.7	-31.9
Industrial Power Sales (000,000 Kwh)[b]	718	721	763	-0.4	-5.9
Total Bank Deposits (Monthly Average) ($000,000)[c]					
Demand	7,700	7,739	7,576	0.5	1.6
Savings	23,110	23,773	23,090	-2.8	0.1
Savings and Loan Associations ($000,000)					
Assets	NA	10,850	9,312	—	—
Mortgage Loans Closed	NA	61	37	—	—
Employment					
Total Labor Force (000)[d]	1,459.9[P]	1,503.7	1,518.8	-2.9	-3.9
Total Employment (000)	1,397.0[P]	1,046.0	1,440.0	-0.6	-3.0
Unemployment Rate (%)	5.9[P]	6.5	5.2	—	—
Wage and Salary Employment (000)	NA	1,134.5	1,169.2	—	—

Note: Includes revisions.

NA = Not Available. January employment data not yet released by the Oklahoma Employment Security Commission.

P = Preliminary.

[a] Natural Gas includes casinghead gas. Natural gas data for current month always preliminary since some individual reports as yet incomplete.

[b] Sales of larger privately owned utility companies.

[c] Total deposits of all depository institutions.

[d] Civilian Labor Force.

RETAIL TRADE IN SELECTED CITIES
($000)

City	Jan. '90 Adjusted	Jan. '90 Unadjusted	Adjusted '90/'89 Jan.	Adjusted '90/'89 Jan./Dec.
Ada	12,756	11,920	5.5	6.9
Altus	11,828	11,323	5.6	10.4
Alva	3,807	3,630	9.0	10.6
Anadarko	4,333	3,828	10.0	17.9
Ardmore	18,324	16,667	6.4	8.3
Bartlesville	24,567	22,872	1.3	-7.5
Blackwell	2,837	2,810	1.1	9.8
Broken Arrow	26,085	24,724	4.9	2.2
Chickasha	10,219	9,570	5.7	4.2
Clinton	6,263	5,949	-2.3	1.0
Cushing	4,850	4,269	6.2	12.6
Del City	8,935	8,598	-0.6	6.4
Duncan	16,956	15,375	4.6	5.0
Durant	10,030	9,183	14.1	13.1
Edmond	24,634	23,968	7.9	14.0
Elk City	7,815	7,487	3.5	4.9
El Reno	8,875	8,650	0.7	6.2
Guthrie	5,765	5,411	1.1	16.7
Guymon	4,815	4,600	-3.8	11.5
Henryetta	3,935	3,493	12.8	15.7
Hobart	2,446	2,399	0.1	4.4
Holdenville	2,245	2,099	-0.9	6.8
Hugo	4,051	3,888	8.1	2.4
Idabel	5,415	5,067	3.4	-0.1
Lawton	40,131	36,098	-5.6	5.7
McAlester	13,086	12,302	9.9	8.1
Miami	10,771	10,076	7.6	29.1
Midwest City	43,969	41,915	5.4	-1.4
Moore	16,207	15,369	8.7	6.6
Muskogee	27,570	24,452	6.2	2.0
Norman	48,913	48,317	1.0	3.2
Oklahoma City	276,133	251,474	2.4	5.5
Okmulgee	5,549	5,206	2.7	3.9
Pauls Valley	5,534	5,246	3.2	5.4
Pawhuska	1,903	1,729	2.0	5.8
Ponca City	18,440	16,874	10.1	12.6
Poteau	6,519	6,370	7.1	-0.6
Sand Springs	10,062	9,098	11.3	5.9
Sapulpa	9,119	8,577	3.3	3.4
Seminole	4,796	4,423	8.9	19.0
Shawnee	23,055	20,748	9.9	3.7
Stillwater	18,758	18,737	4.7	10.7
Tahlequah	8,716	8,061	17.5	10.2
Tulsa	286,861	264,004	7.5	0.8
Watonga	1,605	1,428	11.2	0.8
Weatherford	6,747	6,808	2.2	0.4
Wewoka	1,402	1,365	6.8	-4.2
Woodward	11,336	10,547	5.0	9.5
Total	1,128,968	1,047,004	4.7	4.3

RETAIL TRADE IN METRO AREAS AND STATE
($000)

Retail Trade	Jan. '90	Jan. '89	Dec. '89	Jan. '89	Percentage Change		
					Jan. '90/'89	Jan. '90/Dec. '89	
	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	167,542	158,685	145,641	154,607	5.6	15.0	2.1
Apparel	29,775	26,274	28,602	24,242	13.3	4.1	-51.7
General Merchandise Group	92,263	87,733	96,589	82,489	5.2	-4.5	-52.6
Furniture & Appliances	28,815	26,466	23,124	27,507	8.9	24.6	-8.2
Lumber & Building Materials	19,466	16,881	17,119	14,364	15.3	13.7	4.5
Auto Dealers	112,760	128,816	80,395	118,194	-12.5	40.3	54.2
Service Stations	42,481	33,116	35,904	42,126	28.3	18.3	31.3
All Other	52,210	41,768	59,062	41,203	25.0	-11.6	-23.9
Total	545,312	519,739	486,436	504,732	4.9	12.1	-13.3
TULSA MSA							
Food Group	126,644	115,543	129,912	117,361	9.6	-2.5	-16.6
Apparel	19,384	17,421	20,766	16,843	11.3	-6.7	-53.9
General Merchandise Group	91,026	68,488	87,235	73,025	32.9	4.3	-51.5
Furniture & Appliances	18,112	16,420	17,351	20,612	10.3	4.4	-4.1
Lumber & Building Materials	16,939	15,398	15,432	14,181	10.0	9.8	3.4
Auto Dealers	70,724	80,716	50,918	74,203	-12.4	38.9	54.2
Service Stations	25,996	20,302	22,589	25,813	28.0	15.1	31.3
All Other	14,674	17,736	26,251	20,843	-17.3	-44.1	16.0
Total	383,499	352,024	370,454	362,881	8.9	3.5	-19.1
ENID MSA							
Food Group	8,418	8,442	8,564	8,081	-0.3	-1.7	-13.7
Apparel	1,545	1,381	1,622	1,305	11.9	-4.7	-45.5
General Merchandise Group	7,844	6,096	8,199	7,117	28.7	-4.3	-51.4
Furniture & Appliances	1,199	1,229	1,118	1,241	-2.4	7.2	-7.9
Lumber & Building Materials	1,208	954	1,056	892	26.6	14.4	12.2
Auto Dealers	4,875	5,555	3,554	5,255	-12.2	37.2	54.2
Service Stations	2,431	1,896	2,119	2,416	28.2	14.7	31.3
All Other	2,769	3,043	2,488	1,556	-9.0	11.3	-8.0
Total	30,289	28,596	28,720	27,863	5.9	5.5	-21.5
LAWTON MSA							
Food Group	10,629	12,894	11,008	9,884	-17.6	-3.4	-12.9
Apparel	2,210	2,165	2,224	1,780	2.1	-0.6	-50.5
General Merchandise Group	12,376	11,388	12,655	9,600	8.7	-2.2	-57.6
Furniture & Appliances	2,530	2,108	1,895	2,354	20.0	33.5	7.9
Lumber & Building Materials	1,906	1,802	1,860	1,482	5.8	2.5	7.9
Auto Dealers	8,906	10,173	6,373	9,331	-12.5	39.7	54.2
Service Stations	3,704	2,882	3,196	3,690	28.5	15.9	31.3
All Other	1,039	2,135	409	969	-51.3	154.0	280.0
Total	43,300	45,547	39,620	39,090	-4.9	9.3	-22.2
MUSKOGEE AREA							
Food Group	9,811	9,547	10,355	8,995	2.8	-5.3	-17.4
Apparel	2,244	2,093	2,057	1,868	7.2	9.1	-42.8
General Merchandise Group	6,677	5,008	6,809	5,480	33.3	-1.9	-57.5
Furniture & Appliances	1,244	957	878	1,048	30.0	41.7	-4.7
Lumber & Building Materials	1,301	967	1,384	988	34.5	-6.0	-5.2
Auto Dealers	4,269	4,866	3,063	4,600	-12.3	39.4	54.2
Service Stations	2,716	2,112	2,309	2,692	28.6	17.6	31.3
All Other	1,688	2,096	2,090	1,248	-19.5	-19.2	-40.9
Total	29,950	27,646	28,945	26,919	8.3	3.5	-25.9
STATE[a]							
Durable Goods	421,373	462,450	339,427	417,547	-8.9	24.1	21.7
Auto Dealers	261,651	298,616	186,661	276,693	-12.4	40.2	54.2
Accessory Dealers	32,472	33,875	32,661	26,949	-4.1	-0.6	-15.7
Total Automotive	294,123	332,491	219,322	303,642	-11.5	34.1	43.6
Furniture	43,951	36,431	36,728	43,221	20.6	19.7	2.2
Household Appliances	22,032	22,572	22,925	21,800	-2.4	-3.9	-24.2
Total Furniture and Appliances	65,983	59,003	59,653	65,021	11.8	10.6	-8.4
Lumber and Building Materials	55,056	49,950	42,780	43,798	10.2	28.7	19.5
Hardware Stores	5,987	5,807	5,975	4,979	3.1	0.2	-24.9
Total Lumber, Building Materials & Hardware	61,043	55,757	48,755	48,777	9.5	25.2	12.7
Nondurable Goods	981,468	920,032	1,081,513	868,487	6.7	-9.3	-36.3
Apparel	73,287	66,970	82,620	62,283	9.4	-11.3	-53.9
Drug Stores	38,711	37,570	38,118	36,197	3.0	1.6	-29.0
Eating and Drinking Places	149,951	138,262	151,110	132,853	8.5	-0.8	-12.4
Food Group	305,442	289,879	320,220	286,514	5.4	-4.6	-19.1
Service Stations	124,591	97,215	104,734	123,472	28.2	19.0	31.3
General Merchandise Group	228,878	226,823	271,659	170,405	0.9	-15.7	-65.0
Total Retail Trade	1,402,841	1,382,482	1,420,940	1,286,034	1.5	-1.3	-24.6

[a] Total includes data for categories not shown in the table

ENID AND LAWTON MSAs
MUSKOGEE MA

Category	Jan. '90	Jan. '89	Dec. '89	Percentage Change	
				Jan. '90/'89	Jan. '90/Dec. '89
ENID MSA					
Employment (Number)					
Labor Force[a]	NA	28,050	27,600	—	—
Total Employment	NA	26,400	26,475	—	—
Unemployment Rate (%)	NA	5.9	4.1	—	—
Wage and Salary Employment	NA	NA	NA	—	—
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	265	0	140	—	89.3
Number of Units	2	0	1	—	100.0
Residential—Multi Family					
Dollar Value ($000)	0	0	0	0.0	0.0
Number of Units	0	0	0	0.0	0.0
Nonresidential					
Commercial ($000)	9	19	2	-52.6	350.0
Industrial ($000)	0	0	0	0.0	0.0
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	0	0	0	0.0	0.0
All Other Nonbuilding ($000)	0	6	5	—	—
Total Construction ($000)	274	25	147	E	86.4
LAWTON MSA					
Employment (Number)					
Labor Force[a]	NA	47,350	48,075	—	—
Total Employment	NA	44,825	46,025	—	—
Unemployment Rate (%)	NA	5.3	4.3	—	—
Wage & Salary Employment	NA	NA	NA	—	—
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	611	645	175	-5.3	249.1
Number of Units	7	6	1	16.7	600.0
Residential—Multi Family					
Dollar Value ($000)	0	0	0.0	0.0	0.0
Number of Units0	0	0.0	0.0	0.0	
Nonresidential					
Commercial ($000)	350	116	0	201.7	—
Industrial ($000)	5	0	0	—	—
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	0	16	0	—	0.0
All Other Nonbuilding ($000)	0	0	0	0.0	0.0
Total Construction ($000)	966	777	175	24.3	452.0
MUSKOGEE MA					
Employment (Number)					
Labor Force[a]	NA	31,025	30,400	—	—
Total Employment	NA	28,275	28,575	—	—
Unemployment Rate (%)	NA	8.9	6.0	—	—
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	0	329	0	—	0.0
Number of Units	0	5	0	—	0.0
Residential—Multi Family					
Dollar Value ($000)	0	0	0	0.0	0.0
Number of Units	0	0	0	0.0	0.0
Nonresidential					
Commercial ($000)	0	192	0	—	0.0
Industrial ($000)	0	0	0	0.0	0.0
Institutional ($000)	0	139	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	0	0	0	0.0	0.0
All Other Nonbuilding ($000)	0	0	0	0.0	0.0
Total Construction ($000)	0	659	0	—	0.0

Note: Includes revisions. E = Exceeds 600 percent. NA = Not Available. [a] Civilian Labor Force.

Sources for all tables: Local utilities companies; 10th Federal Reserve Bank; Federal Home Loan Bank of Topeka; Oklahoma Employment Security Commission; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by Marjorie E. Earley, Statistician for CEMR and Brian M. Hickey, Data Analyst.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. April 1990.

The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73069. April 1990, volume 58, number 4, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma 73070. Subscription price per year is $10.00 Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

EQUAL OPPORTUNITY STATEMENT

This institution in compliance with Title VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and other Federal laws and regulations does not discriminate on the basis of race, color, or national origin, sex, age, religion, handicap, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Center for Economic and Management Research
University of Oklahoma
Norman, Oklahoma 73019-0450

MEMBER

OKLAHOMA CITY AND TULSA MSAs

Category	Jan. '90	Jan. '89	Dec. 89	Percentage Change Jan. '90/'89	Percentage Change Jan. '90/Dec. '89
OKLAHOMA CITY MSA					
Employment (Number)					
Labor Force[a]	NA	494,300	500,100	—	—
Total Employment	NA	468,700	477,800	—	—
Unemployment Rate (%)	NA	5.2	4.6	—	—
Wage and Salary Employment	NA	415,000	427,100	—	—
Mortgage Loans Closed ($000,000)[b]	NA	13	7	—	—
Bank Deposits ($000,000)[c]					
Demand Deposits	878	891	859	-1.5	2.2
Time and Savings Deposits	1,154	1,216	1,140	-5.1	1.2
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	14,289	11,754	8,077	21.6	76.9
Number of Units	169	104	93	62.5	81.7
Residential—Multi Family					
Dollar Value ($000)	0	5,450	0	—	0.0
Number of Units	0	173	0	—	0.0
Nonresidential					
Commercial ($000)	3,788	3,955	1,353	-4.2	180.0
Industrial ($000)	28	101	0	-72.3	—
Institutional ($000)	866	456	1,415	89.9	-38.8
Nonbuilding					
Streets and Highways ($000)	2,629	569	3,230	362.0	-18.6
All Other Nonbuilding ($000)	45	74	0	-39.1	—
Total Construction ($000)	21,644	22,359	14,075	-3.2	53.8
TULSA MSA					
Employment (Number)					
Labor Force[a]	NA	331,600	340,100	—	—
Total Employment	NA	309,300	322,200	—	—
Unemployment Rate (%)	NA	6.7	5.3	—	—
Wage and Salary Employment	NA	296,400	309,800	—	—
Mortgage Loans Closed ($000,000)[b]	NA	16	16	—	—
Bank Deposits ($000,000)[c]					
Demand Deposits	1,058	952	1,033	11.1	2.4
Time and Savings Deposits	2,147	2,074	2,155	3.5	-0.4
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	10,595	12,551	8,243	-15.6	28.5
Number of Units	132	157	101	-15.9	30.7
Residential—Multi Family					
Dollar Value ($000)	0	63	106	—	—
Number of Units	0	2	2	—	—
Nonresidential					
Commercial ($000)	14,107	3,673	478	284.1	E
Industrial ($000)	43,251	2,074	787	E	E
Institutional ($000)	34	939	119	-96.4	-71.4
Nonbuilding					
Streets and Highways ($000)	1,210	1,527	2,541	-20.8	-52.4
All Other Nonbuilding ($000)	82	248	176	-66.9	-53.4
Total Construction ($000)	69,278	21,075	12,450	228.7	456.4

Note: Includes revisions.
E = Exceeds 600 percent.
NA = Not Available.
[a] Civilian Labor Force.

[b] By Savings and Loan Associations.

[c] Total deposits of large commercial banks (accounted for 35 percent of all commercial bank deposits as of December 31, 1988 for Oklahoma City and 54 percent of all commercial bank deposits as of December 31, 1988 for Tulsa).

CONSTRUCTION, STATE

Category	Jan '90	Jan. '89	Dec. '89	Percentage Change Jan. '90/'89	Percentage Change Jan. '90/Dec. 89
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	27,731	27,826	16,873	-0.3	64.4
Number of Units	333	313	203	6.4	64.0
Residential—Multi Family					
Dollar Value ($000)	85	5,513	469	-98.5	-81.9
Number of Units	6	175	14	-96.6	-57.1
Nonresidential					
Commercial ($000)	18,654	11,529	1,994	61.8	E
Industrial ($000)	43,663	2,276	851	E	E
Institutional ($000)	1,075	2,450	1,637	-56.1	-34.3
Nonbuilding					
Streets and Highways ($000)	13,143	12,199	23,967	7.7	-45.2
All Other Nonbuilding ($000)	154	328	181	-53.1	-14.9
Total Construction ($000)	104,505	62,121	45,971	68.2	127.3

Note: Includes revisions.
E = Exceeds 600 percent.

U8130-1X

OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF OKLAHOMA

CONGRESSIONAL INFO. SERVICE/SRI
ATTN: ROBERTA B. MASON
4520 EAST-WEST HIGHWAY
BETHESDA MD 20814

ISSN 0030-1671

May 1990

VOL. 58, ISSUE 5

SUMMARY OF INDICATORS

Category	2 Mos. '90	2 Mos. '89	Feb. '90	Percentage Change 2 Mos. '90/'89	Percentage Change Feb./Jan. '90
Personal Income (Monthly Average)					
Unadjusted ($000,000)	3,999	3,724	4,016	7.4	0.8
Adjusted for CPI ($000,000)	3,132	3,068	3,138	2.1	-1.8
Crude Oil Production (000 bbl)	8,563	9,862	8,235	-13.2	4.0
Natural Gas Production (000 mcf)[a]	101,117	173,431	147,445	-41.7	-31.9
Industrial Power Sales (000,000 Kwh)[b]	1,441	1,425	723	1.1	0.7
Total Bank Deposits (Monthly Average) ($000,000)[c]					
Demand	7,610	7,616	7,520	-0.1	-2.3
Savings	23,098	23,723	23,085	-2.6	-0.1
Employment					
Total Labor Force (000)[d]	1,504.1	1,502.6	1,509.8	0.1	0.8
Total Employment (000)	1,403.2	1,402.8	1,409.8	0.0	0.9
Unemployment Rate (%)	6.7	6.6	6.7	—	—
Wage & Salary Employment	1,150.1	1,136.6	1,156.6	1.2	1.1
General Business Index	98.1	95.5	97.6	2.7	-1.0

Note: Includes revisions.

[a] Natural Gas includes casinghead gas.

[b] Sales of larger privately owned utility companies.

[c] Total deposits of all depository institutions.

[d] Civilian Labor Force.

RETAIL TRADE IN SELECTED CITIES
($000)

City	Feb. '90 Adjusted	Feb. '90 Unadjusted	Adjusted '90/'89 Feb.	Adjusted 1990 Feb./Jan.
Ada	13,069	11,743	12.1	2.0
Altus	13,475	11,609	13.4	12.3
Alva	3,892	3,346	11.9	1.6
Anadarko	4,290	3,670	11.4	0.6
Ardmore	19,015	17,116	13.0	2.7
Bartlesville	24,722	22,979	8.3	0.9
Blackwell	2,935	2,533	4.6	2.7
Broken Arrow	26,542	24,511	10.6	1.4
Chickasha	10,274	9,470	12.2	0.3
Clinton	6,665	6,279	6.2	5.2
Cushing	4,925	4,203	12.4	1.7
Del City	9,080	8,327	4.0	1.1
Duncan	17,297	16,058	11.9	1.8
Durant	10,044	8,748	19.3	-0.5
Edmond	25,992	23,037	13.5	4.5
Elk City	8,192	7,502	13.5	4.1
El Reno	8,832	8,360	8.3	-0.8
Guthrie	5,810	5,671	8.4	-0.4
Guymon	4,143	4,706	10.8	-14.8
Henryetta	3,836	3,136	12.2	-1.9
Hobart	2,376	2,148	-0.4	-2.7
Holdenville	2,288	2,056	5.6	1.3
Hugo	4,104	3,806	12.3	1.6
Idabel	5,665	5,237	10.2	4.5
Lawton	41,411	37,244	-2.1	2.6

City	Feb. '90 Adjusted	Feb. '90 Unadjusted	Adjusted '90/'89 Feb.	Adjusted 1989 Feb./Jan.
McAlester	13,544	12,291	15.5	2.2
Miami	11,038	9,815	15.2	0.3
Midwest City	46,816	44,456	11.4	3.9
Moore	15,951	15,296	14.4	-1.7
Muskogee	28,550	24,566	12.0	2.2
Norman	54,811	50,434	8.6	9.9
Oklahoma City	288,505	251,644	6.9	3.6
Okmulgee	5,543	5,134	9.9	-0.3
Pauls Valley	5,085	4,784	11.1	-7.3
Pawhuska	1,736	1,553	-0.5	-8.3
Ponca City	18,849	16,175	13.5	2.1
Poteau	6,413	6,032	13.6	-1.4
Sand Springs	9,936	8,550	15.8	-1.1
Sapulpa	9,714	8,096	6.2	5.9
Seminole	4,823	4,187	8.2	0.4
Shawnee	24,629	21,242	14.8	5.8
Stillwater	19,414	16,661	8.6	2.3
Tahlequah	8,520	7,497	16.8	-2.5
Tulsa	290,090	265,314	13.4	0.9
Watonga	1,547	1,262	11.4	-2.8
Weatherford	6,407	5,951	5.2	-4.5
Wewoka	1,439	1,302	6.6	2.9
Woodward	11,000	9,951	10.0	-3.4
Total	1,163,234	1,045,686	10.1	2.4

RETAIL TRADE IN METRO AREAS AND STATE
($000)

Retail Trade	2 Mos. '90	2 Mos. '89	Feb. '90		Percentage Change		
					2 Mos. '90/'89	Feb./Jan. '90	
	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	338,284	317,524	170,508	155,380	6.5	1.6	0.5
Apparel Group	58,419	52,671	28,581	22,514	10.9	-4.2	-7.1
General Merchandise Group	179,980	170,306	88,321	73,168	5.7	-3.6	-11.3
Furniture Group	54,902	51,646	25,920	24,688	6.3	-10.6	-10.2
Lumber Group	38,877	32,697	19,576	14,564	18.9	1.4	1.4
Auto Dealers	275,539	251,562	156,978	154,345	9.5	32.4	30.6
Gasoline	72,755	61,155	31,593	27,237	19.0	-23.2	-35.3
All Other	253,524	230,127	127,155	42,181	10.2	138.7	2.4
Total	1,272,280	1,167,688	648,632	514,077	9.0	17.8	1.9
TULSA MSA							
Food Group	253,524	230,127	127,155	114,838	10.2	0.6	-2.1
Apparel Group	39,813	34,459	20,662	16,550	15.5	7.9	-1.7
General Merchandise Group	173,575	131,954	83,699	63,386	31.5	-6.9	-13.2
Furniture Group	40,637	34,121	21,541	20,464	19.1	12.8	-0.7
Lumber Group	33,386	29,589	16,457	12,864	12.8	-2.8	-9.3
Auto Dealers	171,183	155,975	98,096	96,899	9.8	34.2	30.6
Gasoline	45,383	38,220	20,216	16,690	18.7	-19.7	-35.3
All Other	32,883	34,578	17,955	21,935	-4.9	20.3	5.2
Total	790,384	689,023	405,781	363,626	14.7	5.5	0.2
ENID MSA							
Food Group	17,499	17,031	8,982	8,131	2.7	5.5	0.6
Apparel Group	3,227	2,937	1,668	1,457	9.9	7.0	11.6
General Merchandise Group	15,749	11,589	7,887	5,817	35.9	0.3	-18.3
Furniture Group	2,277	2,257	1,083	1,097	0.9	-9.4	-11.6
Lumber Group	2,391	1,900	1,177	781	25.8	-3.0	-12.4
Auto Dealers	12,085	10,959	7,128	6,862	10.3	43.8	30.6
Gasoline	4,242	3,571	1,892	1,562	18.8	-19.5	-35.3
All Other	4,601	5,440	1,984	1,707	-15.4	-24.2	9.7
Total	62,071	55,684	31,801	27,414	11.5	5.1	-1.6
LAWTON MSA							
Food Group	21,644	25,563	10,984	10,063	-15.3	3.0	1.8
Apparel Group	4,565	4,092	2,336	1,836	11.6	4.8	3.1
General Merchandise Group	24,512	23,479	12,164	9,420	4.4	-1.5	-1.9
Furniture Group	4,406	4,232	1,881	1,748	4.1	-25.5	-25.7
Lumber Group	3,641	3,520	1,753	1,352	3.4	-7.2	-8.8
Auto Dealers	21,657	19,750	12,387	12,185	9.7	33.6	30.6
Gasoline	6,380	5,346	2,818	2,386	19.3	-20.9	-35.3
All Other	2,283	4,101	1,198	1,358	-44.3	10.3	40.1
Total	89,088	90,083	45,521	40,348	-1.1	4.5	3.2
MUSKOGEE AREA							
Food Group	19,845	19,259	10,051	8,983	3.0	2.6	-0.1
Apparel Group	4,351	4,137	2,111	1,619	5.2	-5.8	-13.3
General Merchandise Group	13,582	9,407	6,861	4,810	44.4	2.1	-12.2
Furniture Group	2,232	2,098	976	871	6.4	-22.2	-16.9
Lumber Group	2,457	1,765	1,201	924	39.2	-4.4	-6.5
Auto Dealers	10,577	9,601	6,221	6,007	10.2	42.8	30.6
Gasoline	4,662	3,910	2,028	1,740	19.2	-23.0	-35.4
All Other	4,269	4,434	2,549	1,792	-3.7	48.2	43.6
Total	61,975	54,611	31,998	26,746	13.5	6.7	-0.6
STATE[a]							
Durable Goods	962,705	897,449	530,042	491,878	7.3	22.5	17.8
Auto Dealers	642,263	585,708	369,892	361,323	9.7	35.8	30.6
Accessory Dealers	66,715	64,353	34,044	29,186	3.7	4.2	8.3
Total Automotive	708,978	650,061	403,936	390,509	9.1	32.4	28.6
Furniture	83,719	71,413	40,447	37,408	17.2	-6.5	-13.4
Household Appliances	43,207	44,373	21,402	19,265	-2.6	-1.8	-11.6
Total Furniture and Appliances	126,926	115,786	61,849	56,673	9.6	-5.0	-12.8
Lumber and Building Materials	107,771	91,418	52,285	39,900	17.9	-5.8	-8.9
Hardware Stores	11,988	11,142	5,991	4,826	7.6	-0.1	-3.1
Total Lumber, Building Materials & Hardware	119,759	102,560	58,276	44,726	16.8	-5.2	-8.3
Nondurable Goods	1,948,205	1,859,405	968,244	830,140	4.8	-1.2	-4.4
Apparel	145,468	134,893	72,203	56,011	7.8	-1.5	-10.1
Drug Stores	79,969	73,753	40,993	39,230	8.4	5.2	8.4
Eating and Drinking Places	299,695	278,156	150,088	133,291	7.7	0.3	0.3
Food Group	625,189	599,386	319,119	279,924	4.3	4.3	-2.3
Gasoline	214,441	180,461	94,274	79,832	18.8	-21.5	-35.3
General Merchandise Group	460,365	457,712	231,838	183,816	0.6	1.4	7.9
Total Retail Trade	2,910,910	2,756,854	1,498,286	1,322,018	5.6	6.1	2.8

[a] Total includes data for categories not shown in the table.

ENID AND LAWTON MSAs
MUSKOGEE MA

Category	2 Mos. '90	2 Mos. '89	Feb. '90	Percentage Change 2 Mos. '90/'89	Percentage Change Feb./Jan. '90
ENID MSA					
Employment (Number)					
Labor Force[a]	26,938	27,862	27,325	-3.3	2.9
Total Employment	25,512	26,212	25,725	-2.7	1.7
Unemployment Rate (%)	5.3	6.0	5.9	—	—
Wage and Salary Employment	21,300	21,200	21,400	0.5	0.9
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	594	0	329	—	24.2
Number of Units	5	0	3	—	50.0
Residential—Multi Family					
Dollar Value ($000)	0	0	0	0.0	0.0
Number of Units	0	0	0	0.0	0.0
Nonresidential					
Commercial ($000)	26	41	17	-37.5	93.5
Industrial ($000)	0	0	0	0.0	0.0
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	0	0	0	0.0	0.0
All Other Nonbuilding ($000)	0	6	0	—	0.0
Total Construction ($000)	620	47	346	E	26.4
LAWTON MSA					
Employment (Number)					
Labor Force[a]	47,225	47,188	47,525	0.1	1.3
Total Employment	44,550	44,662	44,500	-0.2	-0.2
Unemployment Rate (%)	5.7	5.3	6.4	—	—
Wage and Salary Employment	34,600	33,400	34,500	3.6	-0.6
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	1,277	1,020	666	25.2	9.0
Number of Units	15	11	8	36.4	14.3
Residential—Multi Family					
Dollar Value ($000)	0	0	0	0.0	0.0
Number of Units	0	0	0	0.0	0.0
Nonresidential					
Commercial ($000)	639	284	289	125.0	-17.4
Industrial ($000)	2,405	0	2,400	—	E
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	0	16	0	—	0.0
All Other Nonbuilding ($000)	0	0	0	0.0	0.0
Total Construction ($000)	4,321	1,320	3,355	227.3	247.3
MUSKOGEE MA					
Employment (Number)					
Labor Force[a]	30,350	30,762	30,450	-1.3	0.7
Total Employment	28,000	28,075	28,000	-0.3	0.0
Unemployment Rate (%)	7.7	8.7	8.0	—	—

Note: Includes revisions.

[a] Civilian Labor Force.

E = Exceeds 600 percent.

Sources for all tables: Local utilities companies; 10th Federal Reserve District Member Banks; Federal Home Loan Bank of Topeka; U.S. Department of Labor, Bureau of Labor Statistics; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, *Progressive Report of the Transportation Director;* Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by Marjorie E. Earley, Statistician for CEMR and Brian M. Hickey, Data Analyst.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. May 1990.

The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73069. May 1990, volume 58, number 5, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma 73070. Subscription price per year is $10.00 Postmaster: Send address changes to the *Oklahoma Business Bulletin,* 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

Center for Economic and Management Research
University of Oklahoma
Norman, Oklahoma 73019-0450

OKLAHOMA CITY AND TULSA MSAs

Category	2 Mos. '90	2 Mos. '89	Feb. '90	Percentage Change	
				2 Mos. '90/'89	Feb./Jan. '90
OKLAHOMA CITY MSA					
Employment (Number)					
Labor Force[a]	496,600	494,100	497,100	0.5	0.2
Total Employment	465,550	468,200	470,700	-0.5	2.2
Unemployment Rate (%)	6.2	5.2	5.3	—	—
Wage and Salary Employment	422,200	417,800	427,100	1.0	2.4
Bank Deposits ($000,000)[b]					
Demand Deposits	879	870	880	1.0	0.1
Time and Savings Deposits	1,159	1,201	1,164	-3.5	0.9
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	26,972	21,779	12,683	23.8	-11.2
Number of Units	310	232	141	33.6	-16.6
Residential—Multi Family					
Dollar Value ($000)	0	5,450	0	—	0.0
Number of Units	0	173	0	—	0.0
Nonresidential					
Commercial ($000)	5,225	6,846	1,437	-23.7	-62.1
Industrial ($000)	28	101	0	-72.3	—
Institutional ($000)	866	2,026	0	-57.3	—
Nonbuilding					
Streets and Highways ($000)	2,629	2,998	0	-12.3	—
All Other Nonbuilding ($000)	152	168	107	-9.5	140.9
Total Construction ($000)	35,872	39,368	14,228	-8.9	-34.3
General Business Index	94.7	94.4	95.3	0.3	1.3
TULSA MSA					
Employment (Number)					
Labor Force[a]	336,400	333,600	338,400	0.8	1.2
Total Employment	315,000	310,000	315,200	1.6	0.2
Unemployment Rate (%)	6.4	7.0	6.9	—	—
Wage and Salary Employment	308,600	297,100	309,100	3.9	0.3
Bank Deposits ($000,000)[b]					
Demand Deposits	1,047	938	1,036	11.7	-2.0
Time and Savings Deposits	2,117	2,075	2,087	2.0	-2.8
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	21,688	23,262	11,093	-6.8	4.7
Number of Units	272	286	140	-4.9	6.1
Residential—Multi Family					
Dollar Value ($000)	76	63	76	20.1	—
Number of Units	2	2	2	0.0	—
Nonresidential					
Commercial ($000)	15,765	6,038	1,658	161.1	-88.2
Industrial ($000)	44,312	6,282	1,061	E	-97.5
Institutional ($000)	928	939	894	-1.2	E
Nonbuilding					
Streets and Highways ($000)	1,210	3,876	0	-68.8	—
All Other Nonbuilding ($000)	568	325	486	74.8	492.7
Total Construction ($000)	84,546	40,784	15,268	107.3	-78.0
General Business Index	97.2	90.8	97.6	7.0	0.9

Note: Includes revisions.

E = Exceeds 600 percent.

[a] Civilian Labor Force.

[b] Total deposits of large commercial banks (accounted for 33 percent of all commercial bank deposits as of December 31, 1989 for Oklahoma City and 57 percent of all commercial bank deposits as of December 31, 1989 for Tulsa).

CONSTRUCTION, STATE

Category	2 Mos. '90	2 Mos. '89	Feb. '90	Percentage Change	
				2 Mos.'90/'89	Feb./Jan. '90
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	53,889	50,793	26,157	6.1	-5.7
Number of Units	638	599	305	6.5	-8.4
Residential—Multi Family					
Dollar Value ($000)	229	5,513	144	-95.9	69.0
Number of Units	11	175	5	-93.7	-16.7
Nonresidential					
Commercial ($000)	25,646	19,580	6,993	31.0	-62.5
Industrial ($000)	47,124	6,677	3,461	E	-92.1
Institutional ($000)	2,159	4,176	1,084	-48.3	0.8
Nonbuilding					
Streets and Highways ($000)	13,143	33,106	0	-60.3	—
All Other Nonbuilding ($000)	754	505	601	49.4	291.0
Total Construction ($000)	142,944	120,349	38,439	18.8	-63.2

Note: Includes revisions. E = Exceeds 600 percent.

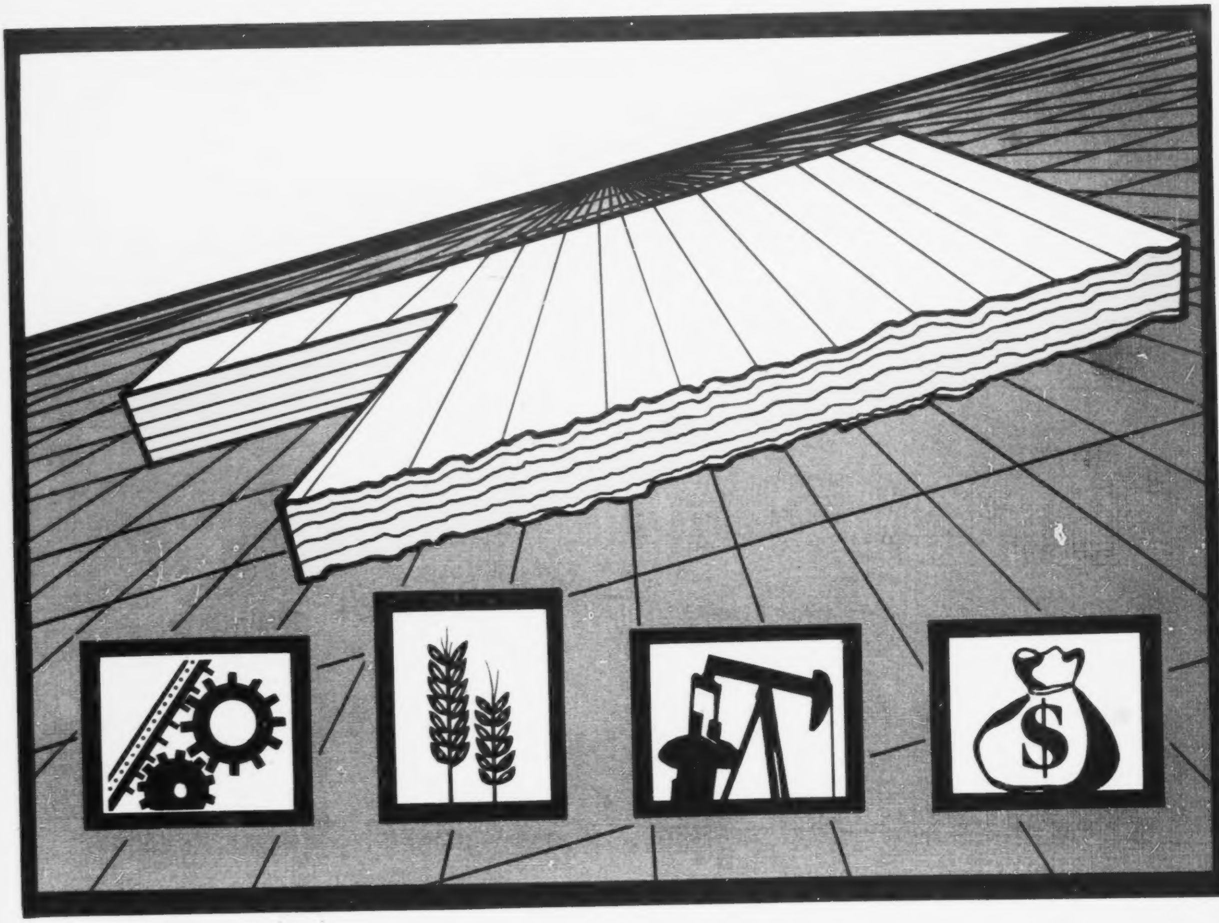
U8130-1

OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF OKLAHOMA

June 1990

VOL. 58, ISSUE 6



The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73019-0450. June 1990, volume 58, number 6, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma. Subscription price per year is $10.00. Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

The Editorial Review Board welcomes original manuscripts, studies, and research reports from persons in both the public and private sector in any area of economics and business administration. The editorial policy of the *Bulletin* promotes a free exchange of ideas and analyses. Accordingly, the contents do not necessarily reflect the views of the editor or the publisher.

Manuscripts for consideration should be typed, double-spaced, and submitted in duplicate. Each submitted manuscript is reviewed by at least two members of the Editorial Review Board and a decision is usually reached in four to six weeks.

Address all manuscripts and correspondence to:

Oklahoma Business Bulletin
Center for Economic and Management Research
307 West Brooks, Room 4
Norman, Oklahoma 73019-0450

The *Oklahoma Business Bulletin* is published by the Center for Economic and Management Research, College of Business Administration, The University of Oklahoma.

©1990 by the Center for Economic and Management Research. Printed in the United States of America.

PUBLICATIONS STAFF

Director	NEIL J. DIKEMAN, JR.
Assistant Director	DAVID PENN
Information Specialist	MARJORIE E. EARLEY
Publication Manager	ALICE WATKINS
Publication Assistant	PATRICIA WICKHAM
Graphics	SUSAN CLANCY
Copyreader	MARILYN CAIN
Data Analyst	BRIAN HICKEY

EDITORIAL REVIEW BOARD

CLYDE C. COLE President, Tulsa Chamber of Commerce, Tulsa, Oklahoma.

JAMES A. CONSTANTIN David Ross Boyd Professor Emeritus, College of Business Administration, University of Oklahoma, Norman, Oklahoma.

JAMES E. HIBDON Professor of Economics, University of Oklahoma, Norman, Oklahoma.

H.E. RAINBOLT Chairman of the Board, Federal National Bank & Trust Company, Shawnee, Oklahoma.

ROBERT L. SANDMEYER Dean, College of Business Administration, Oklahoma State University, Stillwater, Oklahoma.

WILLIS J. WHEAT T.K. Hendrick Professor of Marketing/Management, School of Management and Business Sciences, Oklahoma City University.

DANIEL A. WREN Professor of Management, University of Oklahoma, Norman, Oklahoma.

CEM
RESEARCH
Center for Economic and Management Research

Table of Contents

TABLES

Summary of Indicators 2
Selected Economic Indicators 2
Retail Trade in Metro Areas and State 3
Retail Trade in Selected Cities 4

Metropolitan Area Data

Enid and Lawton 5
Muskogee 5
Tulsa 6
Oklahoma City 7

ARTICLES

Business Highlights 8
David Penn

An Analysis of Oklahoma's Economy 10
Craig Knutson

Developing Oklahoma's Potential as a Warehouse Distribution Center 20
Steve Smith

Occupational Patterns in the Oklahoma Manufacturing Industries 29
Gerald M. Lage

The Single European Act in 1992: Prospects for Success and Influences on the U.S.A. and Oklahoma Economies[1] 35
A.J. Kondonassis

SUMMARY OF INDICATORS

				Percentage Change	
Category	3 Mos. '90	3 Mos. '89	March '90	3 Mos. '90/'89	March/Feb. '90
Personal Income (Monthly Average)					
Unadjusted ($000,000)	4,031	3,746	4,063	7.6	0.8
Adjusted for CPI ($000,000)	3,149	3,078	3,157	2.3	0.2
Crude Oil Production (000 bbl)[a]	16,691	17,953	7,215	-7.0	-23.9
Natural Gas Production (000 mcf)[a]	323,170	342,754	140,323	-5.7	-23.3
Industrial Power Sales (000,000 Kwh)[b]	2,161	2,106	720	2.6	-0.4
Total Bank Deposits (Monthly Average) ($000,000)[c]					
Demand	7,551	7,549	7,433	0.0	-1.2
Savings	23,011	23,663	22,839	-2.8	-1.1
Savings and Loan Associations ($000,000)[d]					
Assets	9,824.7	10,781.8	9,734.4	-8.9	-1.8
Mortgage Loans Closed	21	47	20	-55.3	-10.8
General Business Index	97.9	95.7	97.4	2.3	-0.2

Note: Includes revisions.

[a] One month and January data. Natural gas includes casinghead gas.

[b] Sales of larger privately owned utility companies.

[c] Total deposits of all depository institutions.

[d] Two months and February data.

SELECTED ECONOMIC INDICATORS

				Percentage Change	
Category	3 Mos. '90	3 Mos. '89	March '90	3 Mos. '90/'89	March/Feb. '90
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	83,030	80,856	28,916	2.7	9.9
Number of Units	1,001	957	358	4.6	15.9
Residential—Multi Family					
Dollar Value ($000)	899	5,513	670	-83.7	366.4
Number of Units	43	175	32	-75.4	540.0
Nonresidential					
Commercial ($000)	43,070	29,203	17,423	47.5	149.1
Industrial ($000)	53,401	7,260	5,687	E	40.4
Institutional ($000)	5,498	4,561	3,339	20.5	208.1
Nonbuilding					
Streets and Highways ($000)	40,943	47,621	27,800	-14.0	111.5
All Other Nonbuilding ($000)	1,276	1,134	522	12.5	-13.1
Total Construction ($000)	228,116	176,149	84,357	29.5	61.2
EMPLOYMENT TRENDS					
Total Labor Force (000)[a]	1,512.8	1,499.9	1,530.3	0.9	1.3
Total Employment (000)	1,422.2	1,400.9	1,447.1	1.5	2.6
Unemployment Rate (%)	6.3	6.6	5.4	—	—
Wage and Salary Employment (000)	1,155.5	1,141.5	1,166.4	1.2	0.8
Manufacturing (000)	162.5	161.7	164.8	0.5	0.4
Mining (000)	43.9	42.5	43.3	3.3	-1.1
Government (000)	257.2	254.1	261.2	1.2	1.1
Contract Construction (000)	34.8	33.0	35.2	5.5	1.4
Services (000)	259.8	251.8	263.3	3.2	1.5
Retail Trade (000)	214.8	211.4	215.3	1.6	1.2
Average Weekly Hours (Per Worker)					
Manufacturing	41.7	40.7	41.6	2.5	1.2
Average Weekly Earnings ($ Per Worker)					
Manufacturing	440.19	426.87	451.36	3.1	3.3
Contract Construction	447.63	414.82	432.12	7.9	-0.7
Retail Trade[b]	190.76	191.78	190.62	-0.5	5.9

Note: Includes revisions in some previous months.

[a] Civilian Labor Force. Labor Force employment and unemployment rate refer to place of residence, non-agricultural wage and salary employment refers to place of work.

[b] Excluding eating and drinking places.

E = Exceeds 600 percent.

RETAIL TRADE IN METRO AREAS AND STATE
($000)

					Percentage Change		
	3 Mos. '90	3 Mos. '89	March '90		3 Mos. '90/'89	March/Feb. '90	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	511,317	480,907	172,546	170,172	6.3	1.0	9.5
Apparel Group	87,646	79,272	28,991	31,524	10.6	1.0	40.0
General Merchandise Group	274,628	277,445	93,588	92,828	-1.0	5.1	26.9
Furniture Group	88,938	77,650	33,649	30,384	14.5	25.6	23.1
Lumber Group	53,648	48,025	15,581	14,784	11.7	-17.3	1.5
Auto Dealers	453,928	381,936	173,071	151,922	18.8	11.8	-1.6
Gasoline	111,527	99,806	38,020	37,543	11.7	17.3	37.8
All Other	164,386	119,263	53,599	44,705	37.8	-6.1	6.0
Total	1,746,018	1,564,304	609,045	573,862	11.6	5.3	11.6
TULSA MSA							
Food Group	387,736	350,798	133,264	133,694	10.5	4.3	16.4
Apparel Group	59,143	53,334	19,329	19,642	10.9	-5.8	18.7
General Merchandise Group	252,082	207,729	80,414	80,386	21.4	-2.9	26.8
Furniture Group	61,515	51,088	20,869	19,156	20.4	-2.9	-6.4
Lumber Group	48,809	43,888	15,705	14,583	11.2	-3.4	13.4
Auto Dealers	282,256	237,026	108,185	95,378	19.1	11.8	-1.6
Gasoline	68,848	61,706	23,414	23,005	11.6	16.9	37.8
All Other	54,053	52,731	19,811	19,982	2.5	6.0	-8.9
Total	1,214,442	1,058,300	420,991	405,826	14.8	4.1	11.6
ENID MSA							
Food Group	27,194	26,028	9,472	9,458	4.5	3.8	16.3
Apparel Group	5,055	4,796	1,760	1,770	5.4	2.7	21.5
General Merchandise Group	24,411	19,955	8,501	8,131	22.3	6.3	39.8
Furniture Group	3,535	3,390	1,238	1,221	4.3	13.0	11.3
Lumber Group	3,496	2,957	1,109	998	18.2	-5.5	27.3
Auto Dealers	20,417	17,089	7,984	6,754	19.5	13.5	-1.6
Gasoline	6,437	5,767	2,189	2,153	11.6	16.7	37.8
All Other	5,912	6,591	1,576	1,639	-10.3	-12.7	-3.8
Total	96,457	86,573	33,829	32,124	11.4	6.3	17.2
LAWTON MSA							
Food Group	33,118	39,020	11,365	11,720	-15.1	2.8	16.5
Apparel Group	6,936	6,442	2,348	2,356	7.7	-0.3	28.3
General Merchandise Group	36,319	36,086	11,856	11,228	0.6	-2.3	19.2
Furniture Group	6,555	6,517	2,108	2,049	0.6	9.8	17.2
Lumber Group	5,397	5,419	1,757	1,808	-0.4	0.2	33.7
Auto Dealers	35,705	30,007	13,689	11,994	19.0	12.2	-1.6
Gasoline	9,670	8,627	3,256	3,289	12.1	14.6	37.8
All Other	4,004	6,087	1,573	1,490	-34.2	25.6	9.7
Total	137,704	138,205	47,952	45,934	-0.4	5.4	13.8
MUSKOGEE AREA							
Food Group	30,882	29,190	10,805	10,608	5.8	6.6	18.1
Apparel Group	6,598	6,347	2,233	2,343	4.0	5.4	44.7
General Merchandise Group	19,971	16,076	6,482	6,131	24.2	-4.7	27.5
Furniture Group	3,435	3,151	1,181	1,097	9.0	17.7	25.9
Lumber Group	3,532	2,665	1,114	1,136	32.5	-4.4	22.9
Auto Dealers	17,781	14,930	6,864	5,913	19.1	11.9	-1.6
Gasoline	7,130	6,371	2,431	2,398	11.9	17.4	37.8
All Other	5,715	5,603	1,620	1,575	2.0	-35.3	-12.1
Total	95,044	84,333	32,730	31,201	12.7	2.5	16.7
STATE[a]							
Durable Goods	1,531,345	1,354,403	559,085	494,669	13.1	6.7	0.6
Auto Dealers	1,064,853	895,442	407,936	355,651	18.9	11.9	-1.6
Accessory Dealers	98,278	94,754	31,675	31,325	3.7	-7.2	7.3
Total Automotive	1,163,131	990,196	439,611	386,976	17.5	10.2	-0.9
Furniture	121,329	103,627	38,644	39,364	17.1	-3.2	5.2
Household Appliances	65,059	66,822	21,855	20,820	-2.6	2.1	8.1
Total Furniture and Appliances	186,388	170,449	60,499	60,184	9.4	-1.4	6.2
Lumber and Building Materials	154,768	138,226	48,064	42,960	12.0	-6.6	7.7
Hardware Stores	18,054	16,797	6,062	5,944	7.5	1.1	23.2
Total Lumber, Building Materials & Hardware	172,822	155,023	54,126	48,904	11.5	-5.8	9.3
Nondurable Goods	2,957,098	2,814,359	1,003,494	977,452	5.1	3.3	17.7
Apparel	215,364	203,759	70,196	75,682	5.7	-2.5	35.1
Drug Stores	116,321	110,969	36,379	36,060	4.8	-11.5	-8.1
Eating and Drinking Places	456,907	418,000	156,330	156,910	9.3	3.8	17.7
Food Group	954,406	914,832	326,951	317,182	4.3	2.0	13.3
Gasoline	328,888	294,501	111,759	110,038	11.7	15.8	37.8
General Merchandise Group	697,372	670,386	235,031	211,830	4.0	0.9	15.2
Total Retail Trade	4.488,443	4,168,762	1,562,579	1,472,121	7.7	4.5	11.4

[a] Total includes data for categories not shown in the table.

RETAIL TRADE IN SELECTED CITIES
($000)

Retail Trade	3 Mos. '90	3 Mos. '89	March '90		Percentage Change		
					3 Mos. '90/'89	March/Feb. '90	
	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
Ada	38,974	35,787	13,050	12,254	8.9	-0.3	4.4
Altus	38,578	34,505	13,338	12,927	11.8	2.5	11.4
Alva	11,739	10,627	3,949	3,844	10.5	-0.1	14.9
Anadarko	12,820	12,045	4,264	4,132	6.4	-0.6	12.6
Ardmore	58,574	52,362	20,385	18,864	11.9	5.8	10.2
Bartlesville	76,247	70,701	26,495	26,292	7.8	5.8	14.4
Blackwell	8,892	8,511	3,057	2,993	4.5	3.3	18.2
Broken Arrow	81,551	73,507	28,274	27,791	10.9	4.8	13.4
Chickasha	32,121	28,735	11,302	11,301	11.8	8.0	19.3
Clinton	20,746	19,241	7,337	7,003	7.8	4.6	11.5
Cushing	14,928	13,763	5,109	4,860	8.5	3.0	15.6
Del City	28,458	27,124	9,970	9,798	4.9	6.1	17.7
Duncan	52,604	47,387	18,021	17,872	11.0	2.8	11.3
Durant	31,582	26,572	11,107	10,480	18.9	8.7	19.8
Edmond	78,628	68,627	27,328	26,224	14.6	3.9	13.8
Elk City	25,019	22,017	8,721	8,404	13.6	3.9	12.0
El Reno	27,532	25,396	9,604	9,363	8.4	7.0	12.0
Guthrie	18,493	16,752	6,543	6,294	10.4	8.0	11.0
Guymon	15,341	14,583	5,258	5,129	5.2	1.4	9.0
Henryetta	11,822	10,656	4,041	3,826	10.9	4.8	22.0
Hobart	7,579	7,356	2,699	2,500	3.0	11.2	16.4
Holdenville	7,092	6,658	2,473	2,349	6.5	5.3	14.3
Hugo	12,803	11,165	4,579	4,243	14.7	10.3	11.5
Idabel	17,010	15,321	5,874	5,636	11.0	3.0	7.6
Lawton	126,637	128,692	43,882	42,345	-1.6	4.1	13.7
McAlester	41,186	36,076	14,024	13,632	14.2	0.9	10.9
Miami	33,860	29,764	11,678	11,161	13.8	5.0	13.7
Midwest City	142,996	126,796	50,177	48,618	12.8	6.2	9.4
Moore	48,692	44,172	16,343	16,631	10.2	1.7	8.7
Muskogee	87,356	77,678	30,317	28,529	12.5	4.9	16.1
Norman	164,156	147,906	58,262	52,858	11.0	4.9	4.8
Oklahoma City	877,698	801,372	304,814	288,541	9.5	3.9	14.7
Okmulgee	17,322	15,714	6,099	5,978	10.2	8.5	16.4
Pauls Valley	16,671	15,186	5,996	5,827	9.8	16.8	21.8
Pawhuska	5,665	5,352	2,010	1,832	5.8	14.9	18.0
Ponca City	57,001	50,948	19,523	18,599	11.9	2.9	15.0
Poteau	20,218	17,618	7,183	6,908	14.8	10.5	14.5
Sand Springs	30,108	26,493	10,096	9,772	13.6	1.4	14.3
Sapulpa	29,413	27,318	10,371	9,592	7.7	5.6	18.5
Seminole	15,003	13,520	5,268	4,886	11.0	7.6	16.7
Shawnee	73,806	67,740	25,581	23,528	9.0	3.1	10.8
Stillwater	58,759	54,343	20,146	18,188	8.1	3.1	9.2
Tahlequah	26,561	22,608	9,100	8,781	17.5	4.8	17.1
Tulsa	889,477	780,360	308,266	296,123	14.0	5.4	11.6
Watonga	4,688	4,342	1,553	1,457	8.0	0.6	15.5
Weatherford	21,138	19,513	7,877	7,353	8.3	20.9	23.6
Wewoka	4,325	4,052	1,481	1,427	6.7	2.7	9.6
Woodward	35,570	31,825	12,628	12,147	11.8	10.1	22.1
Total Selected Cities	3,557,439	3,208,786	1,235,453	1,179,092	10.9	4.8	12.8

Sources for all tables: Local utilities companies; 10th Federal Reserve District Member Banks; Federal Home Loan Bank of Topeka; Oklahoma Employment Security Commission; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, *Progressive Report of the Transportation Director;* Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by Marjorie E. Earley, Statistician for CEMR and Brian Hickey, Data Analyst.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. June 1990. The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73019. June 1990, volume 58, number 6. Second class postage paid at Norman, Oklahoma 73070. Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

EQUAL OPPORTUNITY STATEMENT

This institution in compliance with Title VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and other Federal laws and regulations does not discriminate on the basis of race, color, or national origin, sex, age, religion, handicap, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

ENID AND LAWTON MSAs

Category	3 Mos. '90	3 Mos. '89	March '90	Percentage Change	
				3 Mos. '90/'89	March/Feb. '90
ENID MSA					
Employment (Number)					
Labor Force[a]	27,133	25,025	27,525	8.4	0.7
Total Employment	25,775	26,100	26,300	-1.2	2.2
Unemployment Rate (%)	5.0	5.8	4.5	—	—
Wage and Salary Employment	21,400	21,400	21,600	0	0.9
Wholesale and Retail Trade	6,200	5,900	6,200	5.1	0
Manufacturing	1,500	1,500	1,500	0	0
Industrial Power Sales (000 Kwh)	109,578	110,593	38,368	-0.9	6.4
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	966	110	375	E	14.0
Number of Units	9	1	4	E	33.3
Residential—Multi Family					
Dollar Value ($000)	0	0	0	0.0	0.0
Number of Units	0	0	0	0.0	0.0
Nonresidential					
Commercial ($000)	74	557	49	-86.6	185.1
Industrial ($000)	0	0	0	0.0	0.0
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	1,188	398	1,188	198.1	—
All Other Nonbuilding ($000)	0	6	0	—	0.0
Total Construction ($000)	2,231	1,071	1,611	108.3	365.7
LAWTON MSA					
Employment (Number)[a]					
Labor Force[b]	47,700	47,083	48,650	1.3	2.4
Total Employment	44,992	44,525	45,875	1.0	3.1
Unemployment Rate (%)	5.7	5.4	5.7	—	—
Wage and Salary Employment	34,700	33,600	35,000	3.3	1.4
Industrial Power Sales (000 Kwh)	49,760	45,547	16,310	9.2	-3.2
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	2,603	1,403	1,326	85.5	99.1
Number of Units	25	16	10	56.3	25.0
Residential—Multi Family					
Dollar Value ($000)	0	0	0	0.0	0.0
Number of Units	0	0	0	0.0	0.0
Nonresidential					
Commercial ($000)	3,839	384	3,200	E	E
Industrial ($000)	2,470	0	65	—	-97.3
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	197	16	197	E	—
All Other Nonbuilding ($000)	0	0	0	0.0	0.0
Total Construction ($000)	9,109	1,803	4,788	405.1	42.7

Note: Includes revisions.

E = Exceeds 600 percent.

[a] Civilian Labor Force.

MUSKOGEE MA

Category	3 Mos. '90	3 Mos. '89	March '90	Percentage Change	
				3 Mos. '90/'89	March/Feb. '90
Employment (Number)					
Labor Force[a]	30,417	30,525	30,550	-0.4	0.3
Total Employment	28,158	27,900	28,475	0.9	1.7
Unemployment Rate (%)	7.4	8.6	6.8	—	—
Industrial Power Sales (000 Kwh)	44,578	41,351	15,659	7.8	4.8
Port of Muskogee					
Tons in	25,665	20,840	9,644	23.2	-3.5
Tons out	34,784	20,009	18,198	73.8	197.1

Note: Includes revisions.

[a] Civilian Labor Force.

TULSA MSA

Category	3 Mos. '90	3 Mos. '89	March '90	Percentage Change 3 Mos. '90/'89	Percentage Change March/Feb. '90
Employment (Number)					
Labor Force[a]	338,900	334,000	343,800	1.5	1.6
Total Employment	318,100	310,500	324,500	2.4	3.0
Unemployment Rate (%)	6.1	7.0	5.6	—	—
Wage and Salary Employment	309,800	298,300	312,200	3.9	3.9
Manufacturing	53,300	52,300	53,700	1.9	0.9
Mining	12,300	12,200	12,500	0.8	0.8
Government	36,700	36,900	37,200	-0.5	1.1
Wholesale and Retail Trade	73,500	71,100	73,700	3.4	0.4
Average Weekly Earnings					
Manufacturing ($ Per Worker)	463.87	437.20	461.70	6.1	2.5
Industrial Power Sales (000 Kwh)	592,464	569,753	199,052	4.0	0.6
Mortgage Loans Closed ($000,000)[b]	11	27	4	-59.3	-25.1
Bank Deposits ($000,000)[c]					
Demand Deposits	1,044	932	1,038	12.0	0.2
Time and Savings Deposits	2,091	2,087	2,040	0.2	-2.3
Air Transportation					
Passengers Enplaning (Number)	333,347	303,980	130,114	9.7	11.1
Passengers Deplaning (Number)	341,795	306,846	129,938	11.4	12.6
Freight (Tons)	7,494	6,308	2,755	18.8	20.3
Water Transportation					
Tulsa Port of Catoosa					
Tons In	155,483	140,347	60,423	10.8	6.9
Tons Out	388,218	362,633	85,029	7.2	-29.7
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	36,235	33,774	14,402	7.3	28.2
Number of Units	459	423	183	8.5	27.1
Residential—Multi Family					
Dollar Value ($000)	76	63	0	20.1	—
Number of Units	2	2	0	0.0	—
Nonresidential					
Commercial ($000)	26,810	9,654	11,045	177.7	566.2
Industrial ($000)	49,374	6,884	5,062	E	377.2
Institutional ($000)	4,267	939	3,339	354.4	273.5
Nonbuilding					
Streets and Highways ($000)	1,825	4,034	616	-54.8	-49.1
All Other Nonbuilding ($000)	865	607	297	42.4	-38.9
Total Construction	119,453	55,916	34,762	113.6	109.1
General Business Index	97.5	91.8	98.2	6.2	0.6

Note: Includes revisions.

[a] Civilian Labor Force.

[b] By Savings and Loan Associations.

[c] Deposits of large commercial banks (accounted for 57 percent of all commercial bank deposits as of December 31, 1989).

OKLAHOMA CITY MSA

Category	3 Mos. '90	3 Mos. '89	March '90	Percentage Change 3 Mos. '90/'89	Percentage Change March/Feb. '90
Employment (Number)					
Labor Force[a]	499,400	492,900	505,000	1.3	1.6
Total Employment	471,400	467,100	483,000	0.9	2.6
Unemployment Rate (%)	5.6	5.2	4.4	—	—
Wage and Salary Employment	425,100	420,200	431,000	1.1	0.9
Manufacturing	47,300	48,400	48,800	-2.3	-0.6
Mining	10,900	11,100	10,900	-1.8	1.9
Government	102,700	99,900	104,400	2.8	1.4
Wholesale and Retail Trade	102,700	102,000	103,200	0.7	0.7
Average Weekly Earnings					
Manufacturing ($ Per Worker)	477.84	485.87	502.24	-1.7	6.2
Industrial Power Sales (000 Kwh)	304,559	296,058	104,001	2.9	4.0
Mortgage Loans Closed ($000,000)[b]	5	9	5	-44.4	-8.6
Bank Deposits ($000,000)[c]					
Demand Deposits	846	843	782	0.4	-11.1
Time and Savings Deposits	1,159	1,181	1,158	-1.9	-0.5
Air Transportation					
Passengers Enplaning (Number)	350,655	336,490	137,453	4.2	30.1
Passengers Deplaning (Number)	354,521	340,779	134,733	4.0	26.3
Freight Enplaned (Tons)	2,564	1,886	924	36.0	22.4
Freight Deplaned (Tons)	3,561	2,415	1,298	47.5	23.7
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	36,808	37,798	9,836	-2.6	-22.5
Number of Units	444	411	134	8.0	-5.0
Residential—Multi Family					
Dollar Value ($000)	670	5,450	670	-87.7	—
Number of Units	32	173	32	-81.5	—
Nonresidential					
Commercial ($000)	7,688	11,196	2,463	-31.3	71.4
Industrial ($000)	1,018	122	400	E	-32.2
Institutional ($000)	866	2,346	0	-63.1	0.0
Nonbuilding					
Streets and Highways ($000)	16,675	5,122	14,046	225.6	434.3
All Other Nonbuilding ($000)	357	486	205	-26.5	91.7
Total Construction ($000)	64,082	62,519	27,620	2.5	58.3
General Business Index	95.1	95.0	95.7	0.0	0.4

Note: Includes revisions.
E = Exceeds 600 percent.

[a] Civilian Labor Force.

[b] By Savings and Loan Associations.

[c] Deposits of large commercial banks (accounted for 33 percent of all commercial bank deposits as of December 31, 1989).

Business Highlights

DAVID PENN

THE OKLAHOMA ECONOMY achieved respectable gains in first quarter of 1990, showing improvements in several indicators including employment, construction, retail sales, and air transportation. While growth could not be described as robust, the first quarter is particularly notable for the breadth of gains across sectors of economic activity. For example:

- Both measures of employment (total employment and wage and salary employment) registered gains during the first quarter relative to 1989
- All but one of the major industries experienced employment gains, including the usually weak mining and construction sectors
- Construction activity rose, with large gains in commercial and industrial construction and modest but welcome gains in single family residential construction
- Retail sales increased in every major category except household appliances
- Weekly hours worked and average weekly earnings showed gains in the manufacturing and construction sectors, and
- Industrial power sales rose modestly.

The only sectors left behind by this broad advance of economic activity included the oil and gas production and financial sectors. In the oil and gas production sector the volume of crude oil and natural gas output fell 7.0 percent and 5.7 percent, respectively, from levels of first quarter 1989. In the financial sector, demand deposits showed no change while bank savings, savings and loan assets, and mortgage loans all experienced declines.

Although modest by comparison with employment growth rates achieved in the state in 1988 and 1989, the 1.2 percent gain in wage and salary employment ranked Oklahoma 38th among the fifty states and District of Columbia, a welcome respite from the bottom ten. The services sector rose by 7,200 jobs relative to 1989, representing more than half the increase in wage and salary employment. Construction employment jumped 1,900 jobs during the period, rising by a large 5.7 percent over the first quarter of 1989. Other significant year-to-year gains occurred in mining (1,400), wholesale trade (3,400), and transportation, communication, and public utilities (1,400). The only major sector to lose employment was finance, insurance, and real estate, falling by 2,500 jobs.

Most of the first quarter employment gains occurred in the Tulsa metropolitan area. Wage and salary employment increased by 11,500, accounting for 82 percent of the gains in Oklahoma from one year earlier. In addition, the Tulsa area experienced very strong gains in retail sales, air transportation, and demand deposits. Industrial construction shot up by more than $40 million due to the work on the American Airlines facility.

Even though Oklahoma manufacturing employment increased by only 0.5 percent from the first quarter of 1989, this was enough to rank Oklahoma 20th in percentage manufacturing employment gain. Weakness in the manufacturing sector became widespread in New England, the Mid-Atlantic region, and the Great Lakes states. In fact, manufacturing employment fell in the U.S. by nearly one percent from the first quarter of 1989 with twenty-five states suffering employment losses in this sector.

The recent disruptions in the U.S. manufacturing sector have created a situation in which the petroleum and agricultural states no longer lay exclusive claim to the growth cellar (the ten states with the slowest rate of employment growth). That dubious honor now belongs to the manufacturing oriented states in New England, Great Lakes area, and the Mid-Atlantic. Virtually all the New England states are now in the bottom ten states in terms of employment growth rate. In addition, the bottom ten is now occupied by states such as New York, Pennsylvania, Michigan, and New Jersey. Massachusetts, well known for economic miracles in the mid-1980s, ranks 50th among the states in employment growth rate.

This is not to suggest that all states are experiencing slow employment growth. By contrast, wage and salary employment grew by at least 3.5 percent in eleven states; eight of these states are west of the Rocky Mountains. In addition, employment growth appears to be strong in the southern states of South Carolina, Georgia, Kentucky, and Florida.

The economic difficulties currently being felt by the manufacturing-intensive areas raise renewed cautions regarding an upcoming slowdown in the U.S. economy. Economic analysts that continue to minimize the likelihood of a national economic slowdown apparently don't live in New England or the Middle Atlantic states.

Besides weakness in the manufacturing sector, further cause for concern in the national economy is raised by the rate of increase of employment costs. Total compensation rose 5.2 percent in the first quarter from 12 months earlier, fueled by a 7.2 percent rise in benefit costs. These percent increases were the largest gains since 1983 and suggest further upward pressure on price levels during the next few quarters. Rising employment costs and weakness in the economically powerful manufacturing states should raise the warning flag of slower economic growth for the Oklahoma economy.

David Penn is Assistant Director for the Center for Economic and Management Research.

An Analysis of Oklahoma's Economy

CRAIG KNUTSON

THE FOLLOWING IS AN ANALYSIS of the economy for Oklahoma and its two largest metros during the 4th quarter 1989. The analysis will cover seven subsectors of the economy, with the subsector carrying the greatest amount of weight first, followed by the remaining subsectors in decreasing importance to the GBI. A look at the 1st quarter 1990 is offered based upon preliminary data and professional intuition.

Energy

The Energy Subsector rose a scant 0.3 percent over the 4th quarter of 1988, with all of the coincident indicators showing some strength relative to last year. The minuscule increase for the 4th quarter can be blamed on the two leading indicators: seismic crew activity and intent-to-drill (ITD) permits. Those two fell 16.2 percent and 0.2 percent, respectively, from the 4th quarter of 1988. Three other indicators — rig activity, oil & gas extraction employment, and combined gross production tax collections—all rose from the previous quarter and the same quarter, last year. Rig activity was up 15.8 percent, employment up 2 percent, and tax collections up an inflation-adjusted 8.8 percent. Unfortunately, those increases are more a reflection of a weak 1988 than a strong 1989.

The seismic crew and ITD numbers don't bode well for the state's energy industry, despite price runups in late '89-early '90 and what international and national analysts were predicting for the industry. While Oklahoma ranked second nationally in new well completions (oil & natural gas) in 1989, that total represented this state's worst performance in over 30 years. In the area of oil production and promise, the adage "the more things change, the more they stay the same" is frighteningly accurate. The *Wall Street Journal* reported that "Energy" was the industry/group leader in December 1989 (Stock price appreciation), with "Oil Drilling" leading the way with a 22.85 percent increase in one month alone. For all of 1989, "Oil Drilling" posted an 89.75 percent increase. The "Major Oil Companies" and "Oil Field Equipment" Groups also posted double digit increases in value during the year. While the "energy pundits," both within the state and outside, forecasted a stronger year for oil prices, energy companies (e.g., Phillips) were planning to increase their exploration and production budgets. And for the first two months of 1990, everyone looked like a forecasting genius.

As has been reported many times in this space, the laws of economics eventually find their way back into the equation, and when they do, someone gets hit. Higher prices beget higher production, and when Oklahoma Sweet hit $22.00 and West Texas Intermediate (WTI) spot prices went over $23.00, production levels began to rise. While a very cold December certainly helped prices temporarily (due to supply shortages), by the end of March and the first of April, OPEC production levels were reported at over 24 million barrels/day, and prices dropped precipitously. Those in the industry expect the seasonal drop in prices and rig activity; this year's was just much more severe. Aberrations are cyclical as well, meaning that for most "upsides" there are "downsides." As we enter the 2nd quarter, oil is very much in a "downside." By mid-April, May delivery WTI had dropped to a 14 month low of $17.68. While it didn't and won't stay at that level indefinitely, the market dynamics point to a very volatile 1st quarter and a very weak 2nd quarter.

Once again, Oklahomans can pay homage to their real "energy god" — natural gas. Natural gas production reached record levels in 1989, despite miserably low prices. Majors like ARCO, AMOCO, EXXON, and

Texaco have all invested heavily in the Arkoma Basin, and some independent drillers have even paid over $1,000/acre for nearby lease rights, something last reported in the early 1980's. Future prospects are even brighter when you consider the $500 million plus investments made last year by ARKLA, MidCon, and ANR. Those companies are either building new or expanding existing pipelines that open up national markets in the east, midwest, and west to Oklahoma gas. As this goes to press, Hadson Gas Systems has committed to build gathering lines to tie into Transok's new pipeline, opening up even more Oklahoma gas to the continental U.S.

As we start the 2nd quarter of 1990, headlines like "Saudis Make Ready To Open Spigots" and "OPEC Members Become Increasingly Nervous As Oil Prices Plunge Again" remind us of "deja vu all over again!" Those could have been headlines from late 1985, but they aren't. Little wonder that 63 percent of all severance tax collections in Oklahoma come from natural gas, *despite* the lower prices. The investments made in the natural gas infrastructure are significant, and they are private-sector driven. Expected rates of return dictate that long-term profitability is virtually assured. As I have stated so many times over the past five years, the natural gas segment of our energy industry is dictating how profitable the industry will be overall. Major "Oil" companies are now describing themselves as "Diversified Energy" companies; that means natural gas is keeping them profitable or returning them to profitability. Regardless of how you state it, natural gas is the energy commodity of the future in Oklahoma, and with the aforementioned investments being made, that future is bright.

Manufacturing

The Manufacturing Subsector posted a rare, but not totally unexpected, decline in the 4th quarter. Given the trends nationally, it is significant that this subsector only declined 2.5 percent from last year. Despite a 1.2 percent rise in Manufacturing employment from the 4th quarter of 1988, weekly hours worked in the Manufacturing Sector continued to rise, posting a 2 percent increase from last year. Within the GBI, weekly hours worked is negatively correlated, meaning that a rise in hours worked reflects a drag on the index. Weekly hours worked has been running in the 41-43 range, meaning employers, on an average, are working their employees more rather than hiring new employees. Again, given the 4th quarter national trends, from the National Association of Purchasing Managers (NAPM) to employment, such cautiousness was probably warranted.

The continued rise in the dollar during the 4th quarter fueled much of the pessimism within this subsector. The NAPM survey for December remained below the 50 percent level for the eighth consecutive month, although it did reach its highest level since June 1989. Nonetheless, a reading below 50 percent suggests the factory sector is shrinking. Most of the economic experts quoted on 4th quarter manufacturing trends talked of "weakness" but with potential for "slight firming in 1990." In other words, the data was mixed. New orders for durable goods rose strongly in both November and December, yet machine tool orders fell 34 percent in December alone and concluded a very dismal year (off 22 percent from 1988). December's total manufacturing employment registered 19,489,000, down 100,000 from December 1988's total. The slumping domestic auto industry, as well as several nationwide strikes helped contribute to those declines. But, remember, over that same one year period (December-December), the overall economy generated 2.4 million jobs. So, to say the manufacturing sector was weak in 1989 is somewhat of an understatement.

Despite that nationwide performance, Oklahoma performed quite well. While the Subsector posed a decline for the quarter, the annual average for Manufacturing Employment reached 163,200 in 1989, up 0.7 percent from 1988. The December-December comparison showed a 2,800 increase to 165,000. Through March 1990, employment has risen further to 165,800, showing surprising strength in light of national trends. One possible reason could be the Oklahoma Department of Commerce (ODOC) report showing that announced investment in new and expanded manufacturers reached $706 million in 1989, just over the $703.7 million announced the previous year. This two year total is the highest in the 1980s, in real or nominal terms! While some of the investment is "planned," much has already been contracted and is taking place. In fact, Oklahoma ranked 7th nationally, from 1987-89, in the number of new plants and expansions, as compiled by Site Selection magazine. The most heartening news about the growth is that it is nonenergy-and nonagriculturally-based, at least in the traditional sense. What little investments we've seen within the historically strong industries of energy and agriculture in this state have been in "value-added" manufacturing (e.g., commodity processing). Diversification is well under way within the Manufacturing Subsector as well.

The 1st quarter began weak, with industrial production and factory orders down, and a report that U.S. manufacturers' overseas investments rose sharply last year, up 20 percent from 1988, which was up 18 percent from 1987. The pace, the report revealed, has continued through the early weeks of 1990. The European Community and Canada were our favorite targets. It appears all this "Japan Bashing" about "buying up America" is hypocritical. Evidently, we are playing the same game, only in a different location! Industrial prospects appeared to be improving somewhat toward the close of the 1st quarter nationally; the trend was the same in Oklahoma. As mentioned previously, employment continues to rise, albeit slowly, and the ODOC reported a 11.1 percent rise in planned investment in Oklahoma during the 1st quarter of 1990. If all the investment comes to fruition, close to

1,700 new jobs would be created, over 60 percent from internal expansions. As the auto industry continues its slow recovery and businesses continue their investments in new plant and equipment, productivity gains and quality products will make us more competitive internationally. Without such investments, further declines could be expected for the remainder of the year.

Construction

The Construction Subsector posted a 0.8 percent increase over last year's level. While up, don't be misled. The construction and real estate industries within this state remain depressed. Quarterly gains within this Subsector tend to reflect last year's weaknesses more than the current quarter's strength. Gains were made both residentially and nonresidentially in the 4th quarter, but those 4th quarter levels remain 28 percent and 15 percent, respectively, below 1985 levels. The Oklahoma construction and real estate industry is witnessing better times, ... but, then all things are relative!

Interest rates trended ever so slightly downward in the 4th quarter, but housing starts ended the year at their lowest level since 1982, our last recession year. In addition to a poor showing in housing starts, new home sales posted their worst record since 1984, with only 650,000 units sold last year. At year's end, real estate pundits were agonizing over the poor performance, but were calling for lower mortgage rates in 1990 to help spur both construction and sales. Unfortunately, 30 year fixed mortgages are now above 10.5 percent in most areas. How has that affected construction and sales? Housing starts nationwide fell 9.3 percent in March, the second monthly drop and the steepest in more than a year. The *Wall Street Journal* ran an article on how builders and home sellers, burdened by an overbuilt and slower market, are offering perks ("giveaways") to sell their properties. Throwing in equipment that used to be "optional extras," arranging for lower interest rates, paying all or part of the closing costs and points are just a few of the measures. We in Oklahoma became accustomed to those giveaways several years ago. While they are still in practice, our market has solidified enough that such giveaways are not as prevalent. Which is a nice way of saying things are not as weak as they once were.

While home sales were weak closing out the 4th quarter, they have picked up in the 1st quarter of 1990, despite the rise in mortgage rates. Oklahoma City's home sales total for the 1st quarter 1990 (1,823) was 4.4 percent above last year's level, while Tulsa posted a 21.7 percent increase over last year's levels. Oklahoma City, with the nation's second lowest median resale price of existing homes, finished the 1st quarter with an average value of $61,025, compared to Tulsa's $72,627. Obviously, both municipalities market their housing affordability as a competitive advantage. Compared to the $180,000-$260,000 priced homes in many of the east and west coast metros, Oklahoma has a real "bottom-line" advantage in the housing area.

Actually, its nonresidential values are equally impressive, relatively speaking. The low levels of new construction in nearly every real estate market over the past 4+ years has been a long term boon to the market. While vacancy rates remain stubbornly high in office, retail, and industrial markets, rental rates and property values have stabilized, and in some markets have actually risen. Calls for more A Class office space, in both metropolitan markets, combined with the recent trend toward refurbishment of existing space, has improved the overall attractability of the market. According to Price, Edwards, Henderson, office vacancy rates citywide have fallen to 27 percent. For those of you unfamiliar with our local market, you might wonder how you can FALL to such a high level, but we, like many southwestern cities, have weathered the +30 percent office market. The Tulsa market has seen similar types of improvement, with similar types of vacancy rates (28-29 percent). Obviously, neither market is in desperate need for additional space, unless it's in the Class A area, which have the highest occupancy and rental rates of all. I have been pushing the "Purchase and Refurbish" Policy for the past 4-5 years; I think I'm safe in pushing for future investment to remain in that arena for another 4-5 years.

While there is little enjoyment in hearing that other cities and states are going through what we've been through, it is interesting to find out how little investors and lenders learn from Texas, Oklahoma and Arizona. The *Wall Street Journal* ran an article recently over how the "spate of overbuilding" has forced developers to cut rent; where a local real estate manager was quoted as saying: "I don't think any prudent developer would have built any of these buildings had we known then what we know now." The place in question: *Florida*, a state that grew 30.1 percent during the decade of the 1980s. The law of "Supply/Demand Imbalance" exists universally. The nation's third largest real estate market (after California and Texas) is drying up. The RTC and the FDIC may have yet another "problem state" on their hands.

Consumer Demand

The Consumer Demand Subsector posed a 0.7 percent increase in the 4th quarter, slightly less than I had anticipated, but much better than past 4th quarter trends. State sales tax collections were up a seasonally- and inflation-adjusted 2.9 percent for the 4th quarter, and a similar gain can be expected in the 1st quarter of 1990. Both General Merchandise and Apparel Tax Collections were up for the quarter, offsetting the weakness seen in the durable side of the economy (autos, in particular). In the metros, the picture was mixed. Oklahoma City actually posted a 1 percent decline, while Tulsa's tax collections rose 1.8 percent. Total retail trade, which includes gas and auto sales, was down from last year in both metros, with Tulsa showing the smallest decline. As I have stated in this space before, without adjustments for a national inflation rate, nearly all of the local data would be positive. Given our relatively low cost of living and levels of inflation, the picture truly is much brighter than the data suggests.

Nationally, the consumer keeps truckin' on. Consumer confidence surveys, the Conference Board's in particular, continue to suggest a cautious but growing sentiment on the part of the consumer. Since consumer spending represents 62-67 percent of GNP (depending upon the month in question), our attitudes and spending habits control the direction in which the economy is headed, despite what us "expert economists" might think. March's survey expanded 3.5 points and was described by the Conference Board as "the first significant improvement in five months." With March's retail sales coming out "better than expected" and both consumer spending and personal income up in March, the 1st quarter should end on a very strong note. In fact, the preliminary GNP number for the 1st quarter showed a 2.1 percent annualized growth rate, almost double the 4th quarter rate. The primary contributor: consumer spending.

Trends have been even stronger here in Oklahoma. While January's retail trade levels jumped only 1.5 percent over 1989's value (led by the nondurable category), state and metropolitan sales tax collections have been posting some very sizeable gains over last year. The state sales tax, which makes up nearly 30 percent of the general revenue fund, has posted gains above a year ago for 11 consecutive months; 11 months does a trend make! Sales tax collections were up 7.9 percent in January and 6.1 percent in February. The March numbers are expected to be equally impressive. Even adjusted for inflation, the numbers remain positive and the trend remains consistent. The City of Tulsa's tax collections posted 13.4 percent and 13.3 percent increases, respectively. Oklahoma City's tax collections were up 55.6 percent and 49.2 percent, *but*, 37.5 percent of that gain is due to a local sales tax increase from 2 cents to 2.75 cents. Still the 1st quarter gains were 18.1 percent and 11.7 percent. Thus, the state's consumers, nearly fully employed and working at slightly higher wages, continue to demonstrate the type of confidence witnessed at the national level. So often, we have found ourselves running counter-cyclically with the nation. As with employment and personal income trends, the Oklahoma consumer has become a mimic of national patterns.

How about the 2nd quarter? Despite the debt and increased savings rate of Americans, at least one analyst (Lacy Hunt) is optimistic about the 2nd quarter. First, the Census Bureau has hired 500,000 people to take the 1990 census. Given the poor rate of returns in many metropolitan areas, those workers may be working even longer than originally planned. Secondly, the minimum wage rose 13.5 percent, which will affect both part time and hourly workers. Hunt calculates that upwards of 14 million Americans "will get a 5-6 percent pay boost in the second quarter." While that should be healthy for consumer spending, the jury is out on what impact that will have on inflation. The 1st quarter numbers, up 5.2 percent from 1st quarter 1989, are higher than desired but explainable (weather and oil). But labor cost increases do not reflect one-time shocks to the system; they have staying power. Benefits, including Social Security, were the primary culprits in the 1st quarter. But, then it seems anymore that "it's always something..."

General

The General Subsector posted a sizeable 5.9 percent increase from last year, led primarily by growth in Services Employment, personal income, overall Wage & Salary Employment, and a declining unemployment rate. Only bankruptcies produced a negative result among the six indicators, rising 9.7 percent from the 4th quarter of 1988. For many years, personal income growth was flat and W&S Employment was declining in our year-over-year comparisons. For the past couple years, both indicators have been moving in concert with one another, and at stronger and stronger rates of growth. We're not about to surpass Nevada, Hawaii, and Delaware in terms of personal income growth, but our growth rates continue to approach the national average. And, as reported recently by State Policy Reports, Oklahoma ranked ninth nationally in terms of a budget balance as a percentage of spending. With a budget balance of 10.6 percent and the national average at 3 percent, both economic growth and fiscal responsibility are contributing to a much brighter picture in Oklahoma.

The 4th quarter ended on a sour note, even though the GNP number was revised upward twice. Even the upward revisions only got us to a 1.1 percent annualized growth rate for the quarter, and a yearly rate of 2.97 percent, the weakest since the recessionary 1980-82 period. The trade deficit and the amount of unprotected debt were moving inversely to one another, with the latter moving much more rapidly than the former. While the savings rate continued to rise and the unemployment rate remained stable at 5.2 percent, the slumping domestic auto industry and inflation had most economists doing their best Paul Revere — "a recession is coming, a recession is coming." Even today, with the 2nd quarter already under way and the 1st quarter GNP number at 2.1 percent, the cries are still heard. In fact, Sindlinger and Co. has declared that one already under way, at least in 41 of the 48 contiguous states. No, Oklahoma is not one of the "lucky seven." From their analysis, high household debt ("negative household liquidity") is the culprit. High debt lessens both our desire and ability to buy. If retailers aren't selling, what can the manufacturer do?

For every Sindlinger, there are a million households that obviously are not a part of their survey. That statement is not meant to defame or denounce the Sindlinger findings. But, almost 3 million jobs were created in 1989 alone, which puts much more money into the pockets of the consumer. And with the NAPM survey results out for April, showing an index value of 50.2 percent (above the 50 percent mark for the first time in 11 months), concerns are not for a recession but an "overheating." I still have trouble talking about an economy "overheating" at 2.1 percent, but, then *Everything is Relative!* There is no ignoring the problems of debt, be they governmental, institutional, or household. However, given the increasing savings rate and "borderless world" in which we now live, debt servicing does appear manageable.

The internationalization of our national and local economies has skewed many theories and statistics to the point that they may no longer be relevant, or, at least, signify what they once did. For example, domestic capacity utilization rates are not as reliable an indicator as they were five years ago because so much of U.S.-based production has been outsourced or lost to foreign countries and locations. Recent political and economic events in the Soviet Union and its Communist-Bloc Satellite countries suggest that internationalization will continue to creep forward, encompassing (much like Hawaii's recent volcanic activity) more and more of the world. German reunification, increased U.S. and Japanese investment in Western Europe, EC 92 and the desire of another six countries to join the EC are economic events that portend further globalization. Today, economic power is more important than military power, hence the success of Germany and Japan. Opportunities abound as barriers diminish. The U.S and Oklahoma must be able to compete for those new market niches.

Closer to home, the Canada-U.S. Free Trade Agreement is being implemented at a much faster pace than originally intended. Furthermore, there are discussions currently underway with Mexico that could result in a "North American Free Trade Area." Since Canada and Mexico represent our first and third largest export markets, and we buy approximately 75 percent of Mexico's exports, such an agreement seems logical. There's even a conference on Joint Ventures and Business Opportunities in the Soviet Union planned for this spring, so, obviously, the world is opening up. As long as capital can (and does) move freely to those countries and businesses yielding the greatest rates of return, the fear of regional trading areas seems to be unfounded. Our concerns should not be that these events are happening, but how we can best compete for the pent up demand. Oklahoma must position itself to serve those markets, and to do so, its products and services must be of such quality as to outperform its competitors. The Oklahoma International Export Services (at the ODOC) is in business to help Oklahoma exporters better market those products and services. Programs like OIES are valuable only when used. If you're an exporter or feel now is the time, contact them. We must use every source available to economically survive the 90's.

Agriculture

The Agricultural Subsector declined 0.7 percent, the first decline in over three years. Wheat and beef prices fell from both the previous quarter and the same quarter last year. Their declines from last year — –2.8 percent and –0.2 — were not significant, and, in the case of wheat, not surprising. While both commodities ended the year on a negative side, relative to last year, 4th quarter price levels for each commodity remain positive when compared to 4th quarter values back as far as 1985, so this softness is recent. Beginning with the 1st quarter 1990, the GBI will include a new commodity — Sorghum — thus expanding this Subsector to three variables.

Mother Nature (AKA the weather) has been doing a number on the nerves and pocketbooks of Oklahoma farmers. Late December produced a severe freeze (two consecutive days of below 0) and rainfall amounts prior to that freeze

According to the U.S. Agriculture Department, 57 million acres of wheat were seeded for harvest this coming spring, up 3 percent from last year, but less than most analysts expected. After two years of drought and declining inventories, most of the "experts" expected a larger planting. With this limited rise, stockpiles probably won't rebound as quickly as expected. From a price stand, that is probably a very good sign. While stockpiles held firm at 1.42 billion bushels at year end 1989, that represented a 17 percent drop from the previous year. With more acres planted and higher yields forecasted, a large harvest is expected and the experts may yet turn out to be correct. Through the 1st quarter 1990, Oklahoma wheat prices are 8.8 percent below last year's prices, in current dollar terms, but off 13.4 percent in inflation-adjusted terms. With the World Agricultural Outlook Board forecasting a 3 percent decline in U.S. wheat exports in 1990, don't expect wheat to positively impact this Subsector in the 1st quarter, or, perhaps, for the rest of the year.

Beef has not been impacted as negatively by Mother Nature and by international competition as has wheat. Cash receipts for livestock in Oklahoma last year were up 6.3 percent. That has helped push cattle inventories up both nationally (3 percent) and in Oklahoma (7 percent). If demand for that increased production is weak, prices should fall. Through the 1st quarter, beef prices are up 1 percent in current dollar terms, meaning not much. Despite the weak numbers, the U.S. beef industry calculates high consumer demand and tighter cattle supplies through mid-1991. That combination should yield both higher prices and profits. Since Oklahoma ranks in the top five nationally in beef production, with close to 60 percent of our agricultural income coming from this industry, one has to feel optimistic about the industry for the remainder of this year.

As usual, weather, economics, and politics control the agricultural destiny of this country and state. While the

Bush Administration is formulating a new farm bill and international trade reform, politics and subsidies are deeply ingrained in the process. When FDR signed the first farm subsidy law in 1933, he said it would be temporary. He felt that the government had no business propping up prices by paying farmers to hold back their harvests. Fifty seven years later, agricultural subsidies "are as much a part of American agriculture as the sun and rain, and tremendously expensive as well." Crop subsidies totalled $133.5 billion during the last decade, most of that coming after 1985. In 1989, about 86 percent of U.S. wheat, cotton, corn, and rice farmers were enrolled in federal crop programs at a cost of $10.5 billion. Will it end? Once again, the internationalization of another industry plays a big role in the answer to that. While the Administration has proposed worldwide elimination of trade-distorting farm policies in GATT talks, they do not want "premature" cuts in U.S. subsidies. Getting everybody to eliminate trade-distortive programs simultaneously is the trick. Look for the 1985 Farm Bill to stay pretty much in tact.

Financial

The Financial Subsector suffered another decline in the 4th quarter, down 5.9 percent from last year's level. While the net income figures for Oklahoma's two largest publicly traded banking institutions posted a slight improvement from last year (+0.7 percent), the thrift situation, at least in terms of lending, continues to flounder. S&L loan closings and commitments were off 6.6 percent and 18.4 percent, respectively. Fourth quarter net income figures for Oklahoma's came in at a negative $28.2 million, $3 million worse than 4th quarter 1988's loss. The only silver lining to the data is, if you eliminate the regulator-controlled institutions (14 in all), the remaining independent institutions (24 in all) posted a positive $4 million net income result. When the data (environment) has been as bad as it's been within this industry for as long as it's been, one looks for those few bright spots of hope. With little lending, poor performance, and a very uncertain future, thrift management is not a highly desirous profession to hold or seek. One other bright spot: the RTC has opened up an office in Tulsa, with the expectation of hiring 180 people. While we all hope these jobs are temporary, the definition of "temporary" in this case may utilize the term "years" instead of "months"!

Nationally, thrifts took a real battering. For the Year 1989, almost $74 billion was withdrawn from the thrift system. Not only was that a record, but the closest year to last year was 1981, when the outflow reached $25.4 billion due to competing money market mutual funds at interest rates over 20 percent. The outflow last year wasn't due to competition, but to security. The problem of insolvent thrifts offering higher interest rates to attract deposits has apparently been remedied by FIRREA. That should certainly help those solvent thrifts which were forced to raise their interest rates just to be competitive.

Unfortunately, the major problems associated with thrifts still exist. While FIRREA may have stopped some of the bleeding, it has also introduced something that is equally devastating — uncertainty. At the end of March, 1990, the RTC had over 30,000 properties valued at almost $140 billion on its inventory list. That list was expected to boom as more and more thrifts are "resolved." To date, not one thrift has been resolved in Oklahoma, so the properties we are now seeing for purchase in our state have come from resolved institutions from outside this state. Is there any wonder why both banks and thrifts are uncertain about their fates, whether they are currently solvent or not! "Maximizing net present value of return" and "minimizing the impact on local financial and real estate markets" are phrases that all local property owners are hopeful that the RTC and the FDIC can achieve.

The banking environment is "relatively" healthy (relative to the thrifts). In fact, Oklahoma banks reported a profit in 1989 (+$133 million), their highest in six years! In the 4th quarter, the profit was $25 million compared to a 4th quarter 1988 loss $3 million. With losses totalling over $310 million from 1985-87, and a "break-even" year in 1988, one can cautiously state that Oklahoma's banking environment is healthy. In fact, the return on assets nationally and in Oklahoma was identical in 1989 at 0.52 percent. Nothing to write home about, but given four years of flat to declining net income, we'll take it! While the net income numbers are improving, Oklahoma still ranked 6th in the nation in terms of the percentage of non-performing loans. What is most interesting, though, is that three of the states above Oklahoma (New York, Connecticut, Massachusetts) are from the Northeast. Arizona and Texas were the other two.

The economic conditions and the recent credit squeeze have hampered lending opportunities in this state, as well as others. As bankers work through the negative numbers and become more familiar with lending in nonenergy and nonagricultural areas of the economy, investments should return to Oklahoma businesses and not outside securities. With loan-to-deposit ratios still at or below 50 percent at most institutions, progress is obviously slow. But with new management, healthier bottom lines, and renewed confidence in the Oklahoma economy, banking will remain the financial sector of greatest potential growth. It takes capital to finance growth; apparently, more and more banks within Oklahoma have the capital.

Conclusion

The Oklahoma economy weakened in the 4th quarter, as it did nationally. While that is neither newsworthy nor positive to most, I find it significant. Significant in that Oklahoma's economy truly is becming more cyclical with the national economy. The counter-cyclical, boom-bust environment of the past 30-50 years may, in fact, have ended. While the land and resources are still here, the investment and the investment environment needed to finance that "commodity-based" past are not. The investments of the late 1980s and today are in nontraditional industries, at least for Oklahoma — Services and noncommodity-based manufacturing.

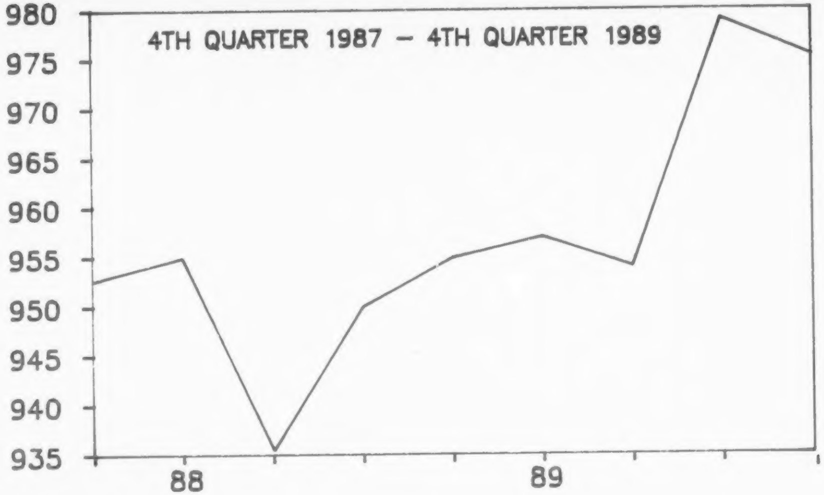
Marquardt, the California-based aerospace and defense contractor broke ground in Lawton in February. One hundred jobs are expected at the site before year-end, with up to 1,500 by 1993. Aviation remains strong in Tulsa, especially since American Airlines has been encouraging its suppliers to move closer to its maintenance facility. With Blue Bell Creameries setting up their first manufacturing plant outside their Texas headquarters in their 83 year history and recent attractees (State Farm & Kimberly Clark) singing Tulsa's praises, Oklahoma's second largest metro continues to post impressive economic gains. Oklahoma City, despite its heavy dependence upon Government (+24 percent of total W&S employment), has seen an increase of 25,000 private sector jobs in the past two years alone, with nearly all of that gain coming from small business. While Oklahoma's governmental composition remains high relative to the national average (22.3 percent versus 16.3 percent), private sector growth has been responsible for the majority of this state's growth since the 1986 "energy crash."

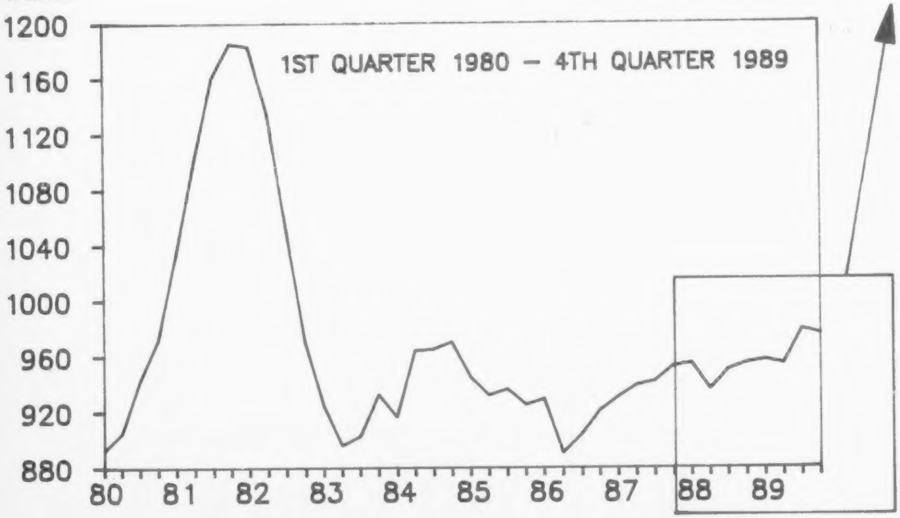
The 1st quarter 1990 GBI numbers, like the preliminary GNP number nationally, should be up, but only slightly so. While our economic base continues to diversify, the road to economic diversification is rocky. The passage of the 5 Year Strategic Economic Development plan in 1988 resulted in an "A" for Policy from the Corporation for Enterprise Development (CED). That was the first "A" this state has received since CED began their economic development report card for the states in 1986. While our scores for economic performance, business vitality, and economic capacity remain weak, the state has a "business plan" to present to domestic and international financial markets. No business can attract capital without one; nor can states. In fact, Tulsa just recently completed its first annual assessment of their 5 Year Plan, and Oklahoma City is currently implementing their recently adopted 5 Year Strategic Plan.

With plans adopted, responsibilities assigned, and implementation underway, Oklahoma and its major metropolitan areas are better positioned than ever to attract the investment capital necessary to grow economically. With the passage of a major educational reform bill, signed into law by the Governor in late April, perhaps Oklahoma will earn several other "A's" from CED, as those long-term investments result in infrastructure and economic improvements in the years ahead. After all, investments in infrastructure (human and physical) *attract* investments in industry (expanded, attracted, or home-grown). Outside investors are leery to invest where local residents are reluctant to do so first. Without "equity" investment, neither external confidence nor capital for internal economic growth will appear. Or, to paraphrase the oft-quoted line from the smash hit "Field of Dreams:" *If you invest, they will come!!*

Craig Knutson is Staff Economist for Southwestern Bell Telephone Company.

OKLAHOMA GENERAL BUSINESS INDEX





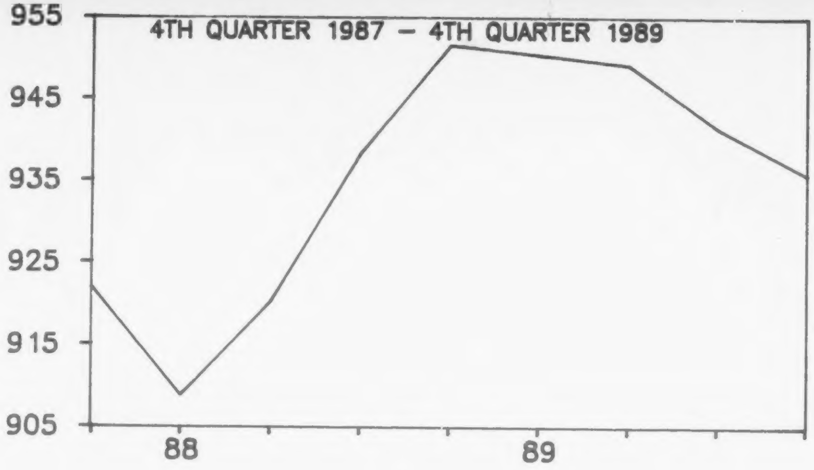
4Q 1989 AVERAGE VALUE	3Q 1989 AVERAGE VALUE	% CHANGE[1]	4Q 1988 AVERAGE VALUE	% CHANGE[1]	4Q 1987 AVERAGE VALUE	% CHANGE[1]
975.1	978.9	–0.4	954.8	2.1	952.6	2.4

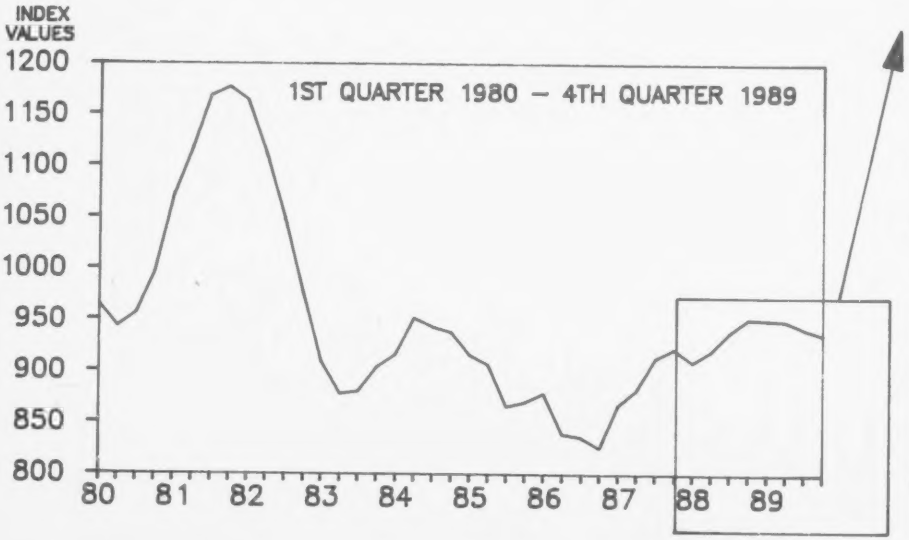
[1] COMPARED TO CURRENT QUARTER

- 1980 – 1989 GBI AVERAGE = 970
- 3rd Q 1987 – 3rd Q 1989 GBI AVERAGE = 957
- The FAA Aeronautical Center, with its $450M budget, is due to expand further in 1990. In addition to training most of the world's air traffic controllers, a new $50M facility is being built, including a state-of-the-art control simulator.
- Both Oklahoma City and Tulsa have attained National Ambient Air Quality Standards, meaning they no longer are nonattainment areas. With improved air quality, both metros have a stronger competitive advantage in their attempts to attract new industry.

SOURCE: SWBT ECONOMIC DEVELOPMENT DISTRICT/CEMR

OKLAHOMA CITY GENERAL BUSINESS INDEX





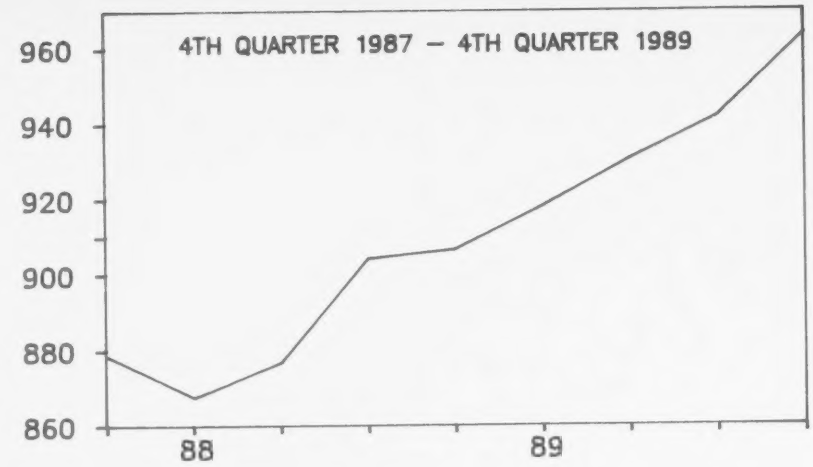
4Q 1989 AVERAGE VALUE	3Q 1989 AVERAGE VALUE	% CHANGE[1]	4Q 1988 AVERAGE VALUE	% CHANGE[1]	4Q 1987 AVERAGE VALUE	% CHANGE[1]
935.7	941.4	–0.6	951.5	–1.7	921.9	1.5

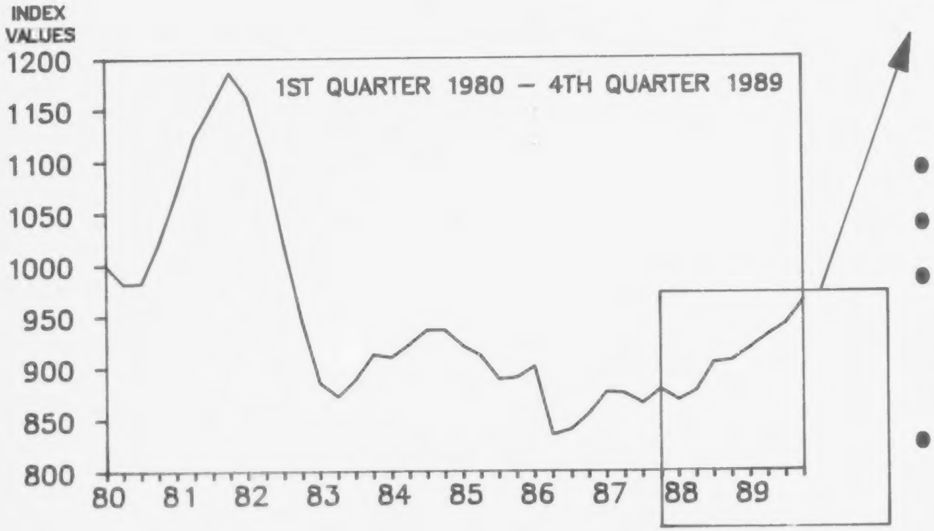
[1] COMPARED TO CURRENT QUARTER

- 1980 – 1989 GBI AVERAGE = 950
- 3rd Q 1987 – 3rd Q 1989 GBI AVERAGE = 935.2
- Local contracts with Tinker are up 25.6% from last year, as base officials stepped up efforts to involve community businesses. Most of these gains have came from seminars offered by purchasing officials in which the federal bidding process is explained and upcoming contracts outlined.
- Will Rogers Airport is seriously being considered for a $500 million United Airlines Maintenance Center that could employ 7,000 people.

SOURCE: SWBT ECONOMIC DEVELOPMENT DISTRICT/CEMR

TULSA GENERAL BUSINESS INDEX





- 1980 – 1989 GBI AVERAGE = 946
- 3rd Q 1987 – 3rd Q 1989 GBI AVERAGE = 909.6
- The new State Farm Insurance regional office employees have spent $20 million on housing and that is expected to rise. The Tulsa office was the first new regional office for State Farm in 18 years.
- Spartan School of Aeronautics' flight school is operating at an all time high, with more than 600 students flying more than 5,000 hours per month. The flight school has grown 35% annually over the last couple of years.

4Q 1989 AVERAGE VALUE	3Q 1989 AVERAGE VALUE	% CHANGE[1]	4Q 1988 AVERAGE VALUE	% CHANGE[1]	4Q 1987 AVERAGE VALUE	% CHANCE[1]
963.4	941.5	2.3	906.5	6.3	878.5	9.7

[1] COMPARED TO CURRENT QUARTER

SOURCE: SWBT ECONOMIC DEVELOPMENT DISTRICT/CEMR

Developing Oklahoma's Potential as a Warehouse Distribution Center

STEVE SMITH

DIVERSIFICATION HAS LONG been recognized as an essential element of long-run economic growth and stability.[1] Whether the emphasis is on enhancing one's personal financial wealth or creating an environment conducive to the expansion of economic opportunity at the city, county, regional, or state level, it is desirable to reduce the risk associated with unforeseen changes in the market by basing this growth on a myriad of activities. In 1981 communities in southeast Michigan began a program to diversify their economic base as they rebuilt after the collapse of the auto industry in the late 1970s.[2] In a similar manner, Oklahomans officially acknowledged the need to diversify their state's economic base in *Oklahoma's Strategic Economic Development Plan, 1988-1992*. These economic development plans hope to stimulate economic diversification by 1) encouraging the expansion of local businesses, 2) creating opportunities for new businesses and 3) attracting new enterprises to the area. Policy aimed at achieving the first two goals has focused on research to identify the resource needs of the growing companies and startups, and implementing an array of state and local government programs to meet these needs. Additionally, efforts have been made to eliminate any unnecessary regulatory barriers to expanding locally or starting a new business. To achieve the third goal, a targeted industry strategy has been implemented which focuses on the recruitment of companies from industries that would enjoy a profit advantage by locating in Oklahoma.[3]

Intuitively, it would appear that Oklahoma's median location coupled with the state's highway networks, air traffic routes, pipelines, and waterways which provide access to origins and destinations all over the nation, give it a significant comparative advantage as a warehousing and distribution center (WDC). This WDC hub advantage creates the potential to attract new companies to the state from a variety of industries that are transportation sensitive, and provide expansion opportunities for Oklahoma based firms.

With an awareness of the state's potential as a WDC, the 1987 session of the Oklahoma Legislature passed HB 1142, the Trucking Industry Self-Funded Research and Development Act (TISRAD). This legislation revised state tax and licensing policy on motor carriers and their equipment in an effort to generate both more state revenue and to diversify the state's economy by making it a more attractive place for motor carrier enterprise. A portion of the additional revenues are to be used to undertake research on public and private strategies to develop the state's trucking, warehousing and distribution potential.

The purpose of this article is to report on the progress of the TISRAD program. It will summarize the work completed in Phase I, with a more detailed review of the subsequent Phase II research on regulatory environment, economic development potential, and equipment productivity.

Phase I

The initial phase of the TISRAD program had both short-term and long-term objectives. The short-term objective was to bring attention to Oklahoma's presence in the motor carrier industry by making it more profitable for companies to register their equipment in the state. This goal was achieved by permitting the carrier to "base plate" a trailer, i.e., register it in Oklahoma even though the equipment may not be in Oklahoma. The initial registration fee is $43 with a $4 fee to renew the license annually without having to physically retag the trailer. This provision offered a significant cost savings to the carrier as evidenced by the attraction of 16,000 additional trailer registrations and an increase of 20.24 percent or $2.8 million in revenue from registrations.

The long-term goal of the legislation was to create and fund an on-going research program to assist in the development of WDC's in Oklahoma. To achieve this goal, the TISRAD committee was created to direct the state's efforts to become a WDC hub.[4] Research funding is provided through the Motor Transportation Safety, Education and Economic Development Research (SEED) Foundation by fees collected from the trailer registrations.[5]

The findings of Phase I research which focused on tax issues, economic development potential, highway management considerations and equipment productivity are given below.

Tax Issues:
Researchers found that Oklahoma's motor carrier tax laws are more than competitive with other states with an annual state tax cost of operating a standard tractor/trailer rig of $2,691 compared to an average cost per state of $5,000 or 86 percent higher than Oklahoma.

Economic Development Potential:
This research focused on the practicability of Oklahoma becoming a WDC hub by identifying target industries with the greatest probability of locating WDC facilities in Oklahoma, analyzing the decision making process for locating WDC's, and developing a cost/service simulation model. The results of these efforts provide the basis for Phase II research and will be covered in more detail later in the report.

Highway Management Considerations:
The requirements of the trucking industry are receiving due consideration by the strategic planning, construction and scheduling system.

The turnpike system is an asset to the development of a WDC, the rural highway system is adequate and the interstate/arterial roadways are only one-third as congested as the national average. The current condition of bridges was not viewed as a limiting factor to developing a WDC hub.

Researchers felt that the enforcement of motor carrier regulations could be improved from both the carriers and regulators point of view through additional staffing, participation in the FNCSAP and a careful analysis of intrastate regulations.

Equipment Productivity:
The report recommended the increased use of special combination vehicles (SCV) be permitted in Oklahoma to determine the economic development potential of this emerging technology.[6]

Phase II

Following the recommendations of the Phase I research team and building from their findings, Phase II research focused on three areas: 1) The impact of the regulatory environment on the site selection criteria for a WDC. 2) The Economic Development Potential of a WDC hub and 3) Oklahoma's Special Combination Vehicle Demonstration Program. This section of the report will provide a summary of the findings of this work.

Regulatory Environment

The location decision making process is influenced by regulatory activity dealing with taxes, infrastructure, and size and weight management. To determine how Oklahoma is positioned relative to other states in these areas, Phase II research updated the data files from Phase I and evaluated the changes that had taken place.

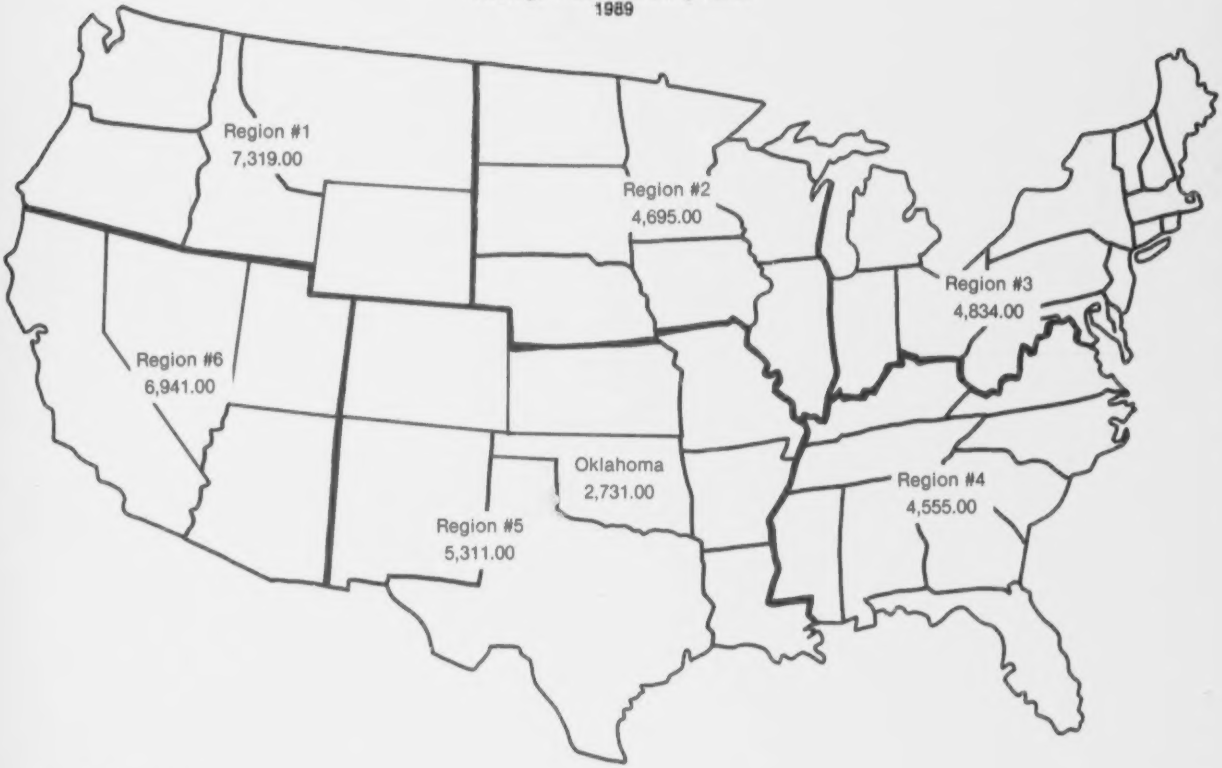
Taxes: The Truck Tax Data Base (TTDB) provides a comparison of taxes paid for a standard tractor semi-trailer rig operating at 80,000 miles per year at 80,000 pounds, for the contiguous 48 states and the District of Columbia. With nearly every state legislature in session since the completion of the Phase I TTDB, it was quite important that the TTDB be updated to reflect any tax changes that had occurred. The recent increase in several Oklahoma taxes further demonstrates the importance of continuously updating the TTDB if it is to be a useful economic development tool. Based on the findings of the Phase II, TISRAD reports Oklahoma continues to enjoy a very favorable tax advantage. Map 1 shows Oklahoma's tax level at $2,731 is far below the average for any region. In fact only three (3) states, Florida, New Hampshire, and Delaware have a lower tax burden. Map 2 shows a comparison of Oklahoma with surrounding states which have truck tax levies ranging from 40 percent to 200 percent higher. As the Phase II research team points out, Oklahoma maintains its tax advantage by "limiting its motor carrier taxes to the basic two structures of fuel and license."

Phase II research was also interested in determining the role of taxation in the location decision making process. The results of a survey taken for the Phase I report indicated that inventory taxes and state and local taxes ranked only 10th and 18th respectively out of 31 factors influencing the location decision. To pursue this question further, the Phase II research team conducted an extensive literature review on the role of taxes in the location decision making process. In conclusion, the researchers found that taxes play a subordinate role to such factors as: access to market, labor cost, transportation services, and raw material needs in choosing a region for a new location. However, it was observed that the role of taxes becomes greater as the geographic area of consideration decreases, indicating that local taxes may be a more important determinant than state taxes when making a site selection.

In summary, it appears that proximity to markets, availability to trucking services, and labor costs will continue to be the primary determining factors in choosing a geographic region for a WDC site. However, local taxes become a more important determinant to final site selection as the geographic area becomes more specific. This is especially true for service and high technology firms.

MAP 1

Average Truck Operating Taxes 1989



Source: Seed Foundation.

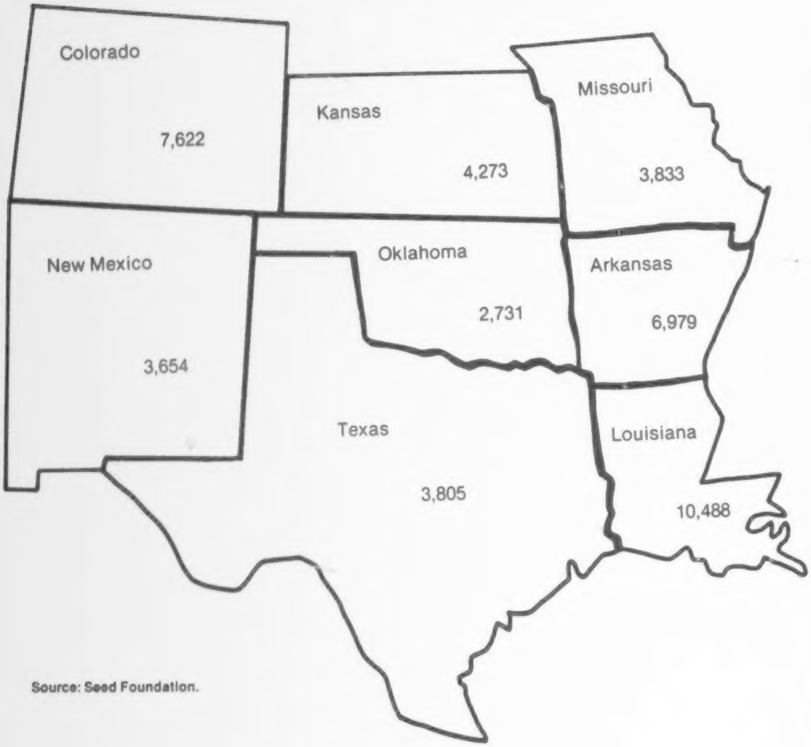
Vehicle Record Management: While the state tax levy may not be a determining factor in the location decision (especially for an interstate carrier), the degree of service provided by the regulatory agency to assist the carrier in compliance with tax laws can play a pivotal role in the state being chosen for a WDC site. Companies will prefer to locate in a state where the regulatory agency has created a "user friendly" environment by making compliance predictable and straightforward for both intra and interstate operations.

In this regard, the Oklahoma Tax Commission (OTC), in cooperation with the state legislature and the Associated Motor Carriers, has implemented a program to make it as easy as possible for the interstate carrier to comply with local tax regulations. The speed, efficiency, and accuracy provided by this program has brought Oklahoma national recognition as a leader in assisting the operations of the motor carrier industry. The OTC has taken the following steps to achieve this high degree of service:

- Membership in the International Registration Plan (IRP) provides a simple one-step registration permitting the carrier to travel among the member jurisdictions while displaying a single license-plate and cab card.
- Membership in the International Fuel Tax Agreement (IFTA) is similar to the IRP in that the program allows the carrier to file with a single jurisdiction to accomplish fuel tax registration, reporting, distribution of tax, and compliance audit.
- Compliance with the recommended principles for uniform fuel tax registration and administration.
- Implementation of a one-stop operation for motor carrier tax compliance.
- Addition of exclusive record storage and introduction of new completely rewritten software to facilitate the record-keeping process.
- Introduction of "registration-only" titles.
- Assignment of a contact person for large accounts.
- Implementation of a "sales calls" approach to demonstrate to carriers that the Commission's program can make it profitable for carriers to locate in Oklahoma.

MAP 2

Average Truck Operating Taxes for Selected States 1989



Source: Seed Foundation.

The efforts of the OTC have been rewarded by a more than 30 percent increase in registrations. In 1989 more than 1,100 new interstate commercial accounts, representing 17,000 commercial tractors and trailers, registered in Oklahoma. The Phillips Petroleum Company has registered its fleet in Oklahoma after receiving information on the benefits of doing so from the OTC.

Highway Management: This segment of Phase II research continued the work begun in Phase I on the adequacy of the state highway system to handle the hub center concept. The research team concluded that the condition and management of Oklahoma's highway infrastructure would be an asset to the development of the WDC hub concept.

Vehicle Size and Weight Regulation: The initial TISRAD research created a computerized size and weight (SW) data base. The SW data provides immediate comparison of size, weight and mileage elements by state for the continental U.S. and the District of Columbia. The Phase II update of the SW data base includes changes as of September 1, 1989. An evaluation of these data indicate that Oklahoma is in line with national trends in size and weight policy.

Economic Development Potential

The Phase I research team concluded that Oklahoma has a comparative advantage in developing a WDC hub. The findings of this work further indicate that distribution centers located in Oklahoma City and Tulsa have a transportation cost and service time advantage over competing cities in the region when shipping to western states, while the operation costs of a WDC facility in Oklahoma is in line with other states. Research on the importance of economic and environmental factors in the WDC location decision found that proximity to markets, availability to trucking services and labor cost in the area rank 1, 2 and 3 respectively. Furthermore, Oklahoma's central location, excellent trucking services, and low cost labor should place the state at the top of any list of potential WDC sites. These results indicate that Oklahoma's success in becoming a WDC hub may be determined primarily by its ability to market the advantages of locating in the state.

To maximize the effectiveness of this marketing effort, Phase I work created a list of industries as having regional or national WDC location potential. This list was then disaggregated into high growth and low growth categories. These targeted industries provide an excellent starting point for a marketing program to develop WDC activity to the state.

Phase II research complements Phase I work by creating specific tools that economic development professionals can use to demonstrate the advantage of locating a WDC in Oklahoma. These tools are a transportation cost and service time data base (TTRACS), a site specific cost data base (TSITE), and a traffic flow data base.

The TTRACS data base provides an estimate of the shipping cost and service time from six alternative WDC locations to six market areas under eight alternative shipment/rate scenarios for fifty 4-digit SIC classifications. (See Table 1) The fifty SIC classifications were chosen on the basis of the target industry research conducted during Phase I of this program and by other economic development programs in the state. The TTRACS transportation cost comparisons may be used to identify market areas for which Oklahoma City or Tulsa have a cost advantage or to select which freight type/rate combination is most advantageous for the firm locating in these Oklahoma cities.

A sample of the data available from TTRACS is shown in Table 2. For example, Oklahoma City has a transportation cost advantage for the distribution of all truck tonnage LTL shipments in SIC industries 3721 and 3724 (aircraft and aircraft engines and parts) under all market conditions except national, and Oklahoma enjoys lower distribution cost for most of the SIC industries listed if the market area is the western half of the U.S.

Service time estimates are also available from TTRACS data for each of the 50 SIC industries by shipment type from six locations to six market areas. (See Table 3) For example, TTRACS shows that meat packing plants (SIC 2011) shipping from Oklahoma City to the west market area have a shorter service time for all shipment types than any other location, except private truck WDC shippers from Denver.

A site specific cost simulation model (TSITE) has also been developed to estimate the cost of a WDC of any size and labor mix located in any of the following locations: Oklahoma City, Tulsa, Kansas City, Dallas/Ft. Worth, Denver and Memphis. The program will compute the cost for each site once the major cost factors of labor, energy, and space, along with the labor mix are specified.

Traffic flow tables for each of the 50 SICS are also available from SEED.

TABLE 1

Market Area, Shipment/Rate, SIC Descriptions, Site Locations

Target Industry Description (1977 SIC)

SIC	Industry Description
2011	Meat Packing Plants
2032	Canned Specialties
2033	Canned Fruits, Vegetables, Etc.
2037	Frozen Fruit, Veg. or Juice
2038	Frozen Specialties
2044	Rice Milling
2048	Prepared Feed
2065	Candy or Other Confectionery
2082	Malt Beverages
2654	Sanitary Food Containers
2621	Periodicals
2731	Books
2741	Misc. Publishing
2771	Greeting Card Publishing
2821	Plastic Materials
2831	Biological Products
2841	Soap or Other Detergents
2842	Specialty Cleaning Prep.
2844	Cosmetics, Perfumes, Etc.
2891	Adhesives and Sealants
3011	Tires or Inner Tubes
3041	Rub or Plas Hose or Belting
3069	Fabricated Rubber Products
3070	Misc. Plastic Products
3229	Misc. Glassware, Blown or Pressed
3452	Bolts, Nuts, Screws, Etc.
3530	Constr. Machinery or Equipment
3561	Pumps and Pumping Equipment
3573	Electronic Computing Equipment
3645	Residential Lighting Fixtures
3661	Telephone or Telegraph Equipment
3662	Radio or TV Transmitting Equip.
3670	Electronic Components
3693	X-Ray Equipment
3711	Motor Vehicles
3713	Motor Bus or Truck Bodies
3714	Motor Vehicle Parts or Access.
3721	Aircraft
3724	Aircraft Engines or Parts
3728	Misc. Aircraft Parts
3751	Motorcycles, Bicycles or Parts
3761	Missiles or Space Vehicles
3823	Mech. Measuring or Control Equip.
3825	Electric Measuring Instruments
3840	Surgical, Medical or Dental Instruments
3861	Photographic Equip. or Supplies
3914	Silverware or Plated Ware
3931	Musical Instruments or Parts
3944	Games or Toys
3949	Sporting or Athletic Goods

Shipment Type	Rate Basis
Less than Truck Load (LTL)	LTL
Truck Load (TL)	TL
For Hire	Average
Private	TL
All Truck	LTL
All Truck	LTL
All Modes	LTL
All Modes	TL

Site Locations

Oklahoma City, Tulsa, Dallas, Denver, Kansas City, Memphis

Market Areas

West South Central: OK, TX, LA, AZ
South Central: OK, TX, LA, AR, MO, KS, CO, NM
Mid America: OK, TX, LA, AR, MO, KS, CO, NM, IA, MN, ND, SD, NB
Mid West: OK, TX, LA, AR, MO, KS, CO, NM, IA, MN, ND, SD, NE, MT, WY, ID, UT, NV
West: OK, TX, LA, AR, MO, KS, CO, NM, IA, MN, ND, SD, NE, MT, WY, ID, AZ, NV, WA, OR, CA, ID

TABLE 2

Transportation Cost Ranking for Oklahoma City Relative to Dallas, Denver, Kansas City and Memphis for All Truck Tonnage LTL Rates for Selected Sic Codes

SIC	National	West	Mid West	Mid America	South Central	W. South Central
2011	3	1	1	1	2	2
2032	3	1	2	2	2	2
2033	3	2	2	2	2	2
2037	3	1	1	1	2	2
2038	3	1	1	1	2	2
2044	3	2	3	3	3	3
2048	3	1	2	2	2	2
2065	3	1	1	1	2	2
2082	3	1	1	1	2	2
2654	3	1	1	1	2	2
2621	3	1	2	2	2	2
2731	3	1	2	2	2	2
2741	3	2	2	2	1	2
2771	3	1	2	2	3	3
2821	3	2	2	3	2	2
2831	3	2	2	2	2	2
2841	3	1	1	1	2	2
2842	3	1	1	2	2	2
2844	3	1	1	1	2	2
2891	3	1	1	1	2	2
3011	3	1	1	2	2	2
3041	3	2	2	2	3	3
3069	3	1	2	2	2	2
3070	3	1	1	1	2	2
3229	3	1	1	2	2	2
3452	3	1	1	2	2	2
3530	3	2	2	2	2	2
3561	3	2	2	2	2	2
3573	3	2	2	2	2	2
3645	3	1	2	2	2	2
3661	3	2	2	2	3	2
3662	3	1	1	1	2	2
3670	3	1	1	2	2	2
3693	3	2	2	2	2	2
3711	3	1	1	1	2	2
3713	3	2	2	2	3	2
3714	3	1	2	2	1	1
3721	2	1	1	1	1	1
3724	2	1	1	1	3	2
3728	2	1	1	2	2	2
3751	3	1	1	1	3	3
3761	2	2	3	3	2	2
3823	4	2	2	2	2	2
3825	3	2	2	3	2	2
3840	3	1	1	1	2	2
3861	3	2	2	2	3	3
3914	3	1	1	2	2	2
3931	2	2	2	2	2	2
3944	3	1	2	2	2	2
3949	3	1	1	2	2	2

Source: TTRACS Data Base, SEED Foundation.

These tables contain the aggregated flow to one of 39 geographic areas in the data base or the aggregated flow from one of 39 areas. Using the traffic flow data, tables can be derived which display all of the 39 potential origins and destinations ranked by total tons shipped by truck, by type of shipment for selected SIC's. Table 4 shows the destination table for meat packing plants (SIC 2011).

Market area analysis tables have also been derived from the traffic flow data for selected SIC's. These tables show how much tonnage by type of shipment, i.e. truck load (TL), less than truck load (LTL), are destined to each market area, and the percentage of nationwide traffic flow the market represents. Table 5 shows the market area table for meat packing plants.

While the TTRAC, TSITE and traffic flow data bases permit rapid and accurate responses to inquiries about locating a WDC in Oklahoma, potentially the most valuable use for these tools is the marketing opportunities

TABLE 3

Service Time Estimates for Meat Packing Plants (SIC 2011) by Site Location for Shipment Type to the West Region

Shipment Types	Rate Basis	Oklahoma City Hours	Tulsa Hours	Dallas Hours	Denver Hours	Kansas City Hours	Memphis Hours
		Site Locations					
LTL	LTL	12.7	12.7	13.6	15.4	13.1	16.6
TL	TL	14.2	14.2	15.6	15.3	14.7	19.0
FOR HIRE	AVERAGE	14.1	14.1	15.5	15.3	14.7	18.9
PRIVATE	TL	16.6	16.6	17.4	16.4	19.1	22.4
ALL TRUCK	LTL	14.8	14.8	16.0	15.6	15.8	19.8
ALL TRUCK	TL	14.8	14.8	16.0	15.6	15.8	19.8
ALL MODES	LTL	14.7	14.7	15.8	16.0	15.9	19.4
ALL MODES	TL	14.7	14.7	15.8	16.0	15.9	19.4

Source: TSITE Data Base, SEED Foundation.

they create. The economic development specialist, armed with the targeted industries list, can make sales calls on companies in these industries and demonstrate to them the profit advantage of locating a WDC in Oklahoma.

Three additional research reports, to be completed in 1990, will provide additional information and tools to assist persons involved in economic development efforts to successfully develop the WDC potential of the state. These research projects are described below.

Case Studies: The objective of this work is to develop case studies of selected firms which have located WDC or plant facilities in Oklahoma to highlight the logistical advantages of locating such facilities in Oklahoma. The case studies could be used to market Oklahoma's WDC potential at professional meetings, in trade magazines, or as part of general feature articles on Oklahoma economic development. In each application, the benefits of locating in Oklahoma are demonstrated as a byproduct of producing a general information piece. The case studies will, to the degree possible, also highlight the tax advantages of locating in Oklahoma.

The firm selected for the warehousing case study was Mac Tools, a subsidiary of Stanley Works. This company represents an excellent example of a firm that has found Dallas/Fort Worth to be too expensive and relocated from that city to Oklahoma City in 1988.

TABLE 4

Destination of Products - Ranked by Total Truck Tonnage

Destination	TL	LTL	Private	Total	Truck
California	1,867,774	26,096	1,149,060	3,428,722	3,042,930
Illinois	1,622,746	25,237	389,218	2,132,976	2,037,201
New York	1,374,925	46,774	269,427	1,694,415	1,691,126
Pennsylvania	1,146,955	66,737	470,934	1,749,328	1,684,626
Wisconsin	594,530	20,566	998,877	1,625,891	1,613,973
Ohio	975,239	27,723	352,201	1,436,355	1,355,163
Florida	1,065,106	32,637	186,842	1,310,834	1,284,585
Capital Area	587,071	22,671	537,162	1,228,350	1,146,904
Carolinas	572,543	26,113	516,504	1,158,027	1,135,160
S. New England	648,561	50,997	146,488	899,209	846,046
Minnesota	671,941	29,505	126,515	839,891	827,961
Texas South	605,959	20,704	181,972	1,198,340	808,635
Kansas	710,824	12,553	70,788	863,738	794,165
Texas East	533,298	20,035	165,966	760,030	719,299
Georgia	474,293	10,958	185,731	757,105	670,982
Dakotas	530,610	7,755	92,744	631,109	631,109
New Jersey	520,676	21,292	77,051	682,290	619,019
Tennessee	403,867	13,751	183,831	638,721	601,449
Indiana	497,494	25,856	60,186	629,581	583,536
Iowa	500,135	12,413	65,096	593,415	577,644
Colorado	363,988	11,512	137,395	531,262	512,895
Louisiana	329,883	18,761	137,989	798,263	486,633
Pacific N W	348,970	5,209	121,993	640,383	476,172
Missouri	364,667	6,178	98,580	633,719	469,425
Arizona	290,665	10,491	138,120	446,439	439,276
Michigan	388,216	5,323	32,751	426,290	426,290
Alabama	217,098	13,175	132,813	376,270	363,086
Texas West	189,456	3,047	126,419	319,085	318,922
Nebraska	222,328	5,014	80,006	379,632	307,348
Oklahoma	210,219	4,643	55,927	299,064	270,789
New Mexico	134,011	4,381	54,786	193,178	194,178
N. Mountain	122,568	6,130	64,432	203,238	193,130
Arkansas	103,313	6,111	76,114	254,371	185,538
Utah	112,652	3,230	21,609	141,557	137,491
Kentucky	68,083	1,748	59,931	130,350	129,762
Mississippi	84,776	1,468	25,801	174,393	112,045
N. New England	68,093	1,952	38,943	124,654	108,988
West Virginia	27,640	1,177	34,566	63,383	63,383
Nevada	2,664	0	2,860	6,882	5,524
Total	19,553,837	649,923	7,667,628	30,400,740	27,871,388

SIC CODE: 2011

INDUSTRY: Meat Packing Plants
Source: SEED Foundation

Analysis of Targeted Industries: This project is a follow-up survey focused on the WDC targeted industries determined in the 1988 research. The 1989 surveys are more focused in terms of the respondent population and with respect to the questions asked. The goal is to develop information immediately useful for economic development policy and implementation, in contrast to the more general nature of the 1988 survey.

Economic Impact Model: The objective of this research is to develop a model that can be used by logistics consultants, academicians, and economic development officers to evaluate the economic impact of WDC and truck facilities locating or expanding in the state. These evaluations could be particularly useful in determining the feasibility of using economic incentives in the form of financing, reduced taxes, property improvements, and so on to assist in the expansion or attraction of a WDC facility. Economic development officials need to know whether the economic benefits justify such incentives.

Equipment Productivity

Studies conducted in a number of Western states over the past 20 years have shown that the use of multitrailer configurations, referred to herein as special combination vehicles (SCVs), significantly improve the productivity of transporting goods by motor freight. The improved productivity from SCV utility translates into large fuel savings; a reduction in air pollution; improved highway safety; and, ultimately, lower prices of consumer goods.

While these benefits are enjoyed by everyone, the Phase I report on equipment productivity concluded that expanding the use of SCVs in Oklahoma could enhance current efforts to attract transportation sensitive industry to the state. Making motor freight transportation more efficient and, therefore, less costly within the state creates new interest and also works to the advantage of companies presently located in Oklahoma.

TABLE 5

Percentage of National Market Ratios

	Tons				
Regional Definition	**TL**	**LTL**	**Private**	**Total**	**Truck**
West South Central	1,972,128 10.09%	73,301 11.28%	744,387 9.71%	3,629,153 11.94%	2,789,816 10.01%
South Central	3,545,618 18.13%	107,925 16.61%	1,105,936 14.42%	5,851,050 19.25%	4,759,479 17.08%
Mid America	5,470,632 27.98%	162,612 25.02%	1,470,297 19.18%	8,295,097 27.19%	7,103,541 25.49%
Mid West	5,999,181 30.68%	182,463 28.07%	1,697,318 22.14%	9,093,213 29.91%	7,878,962 28.27%
Greater Midland Plains	6,973,438 35.66%	187,407 28.84%	2,133,980 27.83%	10,691,771 35.17%	9,294,825 33.35%
West	8,215,925 42.02%	213,768 32.89%	2,968,371 38.71%	13,162,318 43.30%	11,398,064 40.90%
National Total	19,553,837 100.00%	649,923 100.00%	7,667,628 100.00%	30,400,740 100.00%	27,871,388 100.00%

SIC CODE: 2011
Industry: Meat Packing Plants
Source: SEED Foundation

To verify the feasibility of operating SCVs in Oklahoma and to document their potential economic impact, the SEED Foundation Study recommended that a two-year demonstration program be undertaken. Acting on this recommendation, the TISRAD Committee, working in conjunction with the State Legislature, the Oklahoma Department of Transportation (ODOT), the Department of Public Safety (DPS), the Oklahoma Tax Commission, the Corporation Commission, and representatives from the motor carrier industry, approved the implementation of a two-year SCV demonstration program to begin on July 1, 1989. Under this program, carriers would be encouraged to apply for special permits to use SCVs, subject to the specific rules and guidelines which had been established for the program.

Although the research design and the administrative organization is in place and two applications have been approved, the demonstration program at this writing cannot yet get underway. The program has been placed on "hold" until a clarification is obtained of the legal basis for Oklahoma's authority to issue permits for divisible System. Assuming a favorable resolution of this issue, plans have been made to convene a special meeting with interested carriers to explain how the demonstration program is organized. As necessary, plans also include visits with other carriers individually to attract as many additional participants as possible to the program.

Summary

The TISRAD Hub Center Project has attempted to create a new source of economic growth for Oklahoma by implementing a strategy to develop the state's potential as a WDC hub center. The initial phase of this program brought national attention to the state when a permanent "Base Plate" mechanism was established that made it more profitable for carriers to register their equipment in Oklahoma. In addition to this positive exposure to the motor carrier industry, the "Base Plate" program raised revenue collected from trailer registration by 20 percent.

The TISRAD Act also provided funding to conduct research specifically related to the motor carrier industry. Phase I of this research established that

Oklahoma does enjoy a comparative advantage as a WDC hub and identified targeted industries that are likely to locate a WDC in the state. In addition, this research showed that the Oklahoma infrastructure and enforcement system have the capacity to support a WDC hub and that the state's truck tax costs are competitive.

Building on this work, Phase II projects focused on providing economic development specialists in the state with the tools they need to actively market Oklahoma's potential as a WDC hub. To achieve this goal, Phase II research developed several computerized data bases that could be used to demonstrate why it is more profitable to locate a WDC in Oklahoma. The truck tax data base showed that in 1989 Oklahoma's taxes are the fourth lowest in the continental U.S., and that the regional average is 94 percent higher. This research was, however, careful to point out that local taxes may play a bigger role in site location than state taxes.

An analysis of the Oklahoma Tax Commission's ability to serve adequately the motor carrier industry demonstrated that the OTC is a national leader in implementing a system of total service to the interstate motor carrier. The OTC program is so effective that they have been able to attract new large fleet customers to the state by marketing their service capability through brochures, trade-shows, and even making personal sales calls.

A review of the Oklahoma infrastructure concluded, "it can be said that Oklahoma is very well positioned from the standpoint of the condition and management of its highway infrastructure to accommodate the transport element of the WDC hub center concept."

The development of a nationwide size and weight data base revealed that Oklahoma is in line with national trends.

The TTRAC, TSITE, and freight Flow data bases permit a WDC prospect to compare the transportation cost, service time, site cost, and market accessibility for locating his distribution center in any one of six cities and deliver to six market areas for 50 SIC targeted industries. Simulated runs on these data bases show Oklahoma to be a low cost state with excellent service time and market accessibility, especially when distributing to the western states. These tools will allow the economic development specialist to market actively Oklahoma's comparative advantage to the 50 targeted industries chosen as most likely to locate a WDC in Oklahoma.

Research on the feasibility of operating SCVs in Oklahoma is still delayed while the case study, economic impact analysis, and targeted industry survey should be completed in 1990. These additional reports will give policy makers a better idea of what additional steps can be taken to continue developing Oklahoma's potential as a WDC hub.

By demonstrating with thorough research, Oklahoma's comparative advantage as a distribution hub center, the TISRAD program has helped to diversity the state's economy. The tools developed by the TISRAD project can be used by existing businesses, startups, and out-of-state prospects to evaluate the profitability of expanding or locating distribution facilities in Oklahoma.

Notes

[1] Penn, David, "Measures of Diversification," *State Policy and Economic Development in Oklahoma, 1990.* (January, 1990), p. 33-38.

[2] Penn, David, "Base Report Economic Development," Metropolitan Affairs Corporation, Southeast Michigan Council of Governments, (February, 1982).

[3] For further information on targeted industry analysis, see, Doescher, Tabitha A., "Target Industry Analysis," *State Policy and Economic Development in Oklahoma, 1989.* (January, 1989), p. 1-7.

[4] The TISRAD committee is composed of the Lieutenant Governor as Chairman, one member each from the Oklahoma Corporation Commission, and the Oklahoma Tax Commission, the Secretary of the Department of Transportation and the Commissioner of the Department of Public Safety.

[5] For additional information on SEED Foundation research or use of the various SEED WDC Data Bases, call (405) 843-9488.

[6] For a more complete Summary of TISRAD I, see, Smith, Stephen and Larkin Warner, "State Policy for the Development of the Warehousing and Distribution Industry in Oklahoma," *State Policy and Economic Development in Oklahoma: 1989.* (January 1989, p. 49-56).

Steve Smith is Professor, Business Division, Rose State College, Midwest City, Oklahoma.

Occupational Patterns in the Oklahoma Manufacturing Industries

GERALD M. LAGE

Introduction

THE COMMON PERCEPTION OF work in the U.S. manufacturing sector is probably that of blue collar workers, quite likely unionized, performing routine tasks on an assembly line. Such jobs are, of course, at the core of the goods production that we identify with modern manufacturing. Nevertheless, the range of occupations housed within manufacturing establishments—and, therefore, ordinarily counted as "manufacturing jobs"—is indeed long and diverse. The range covers such areas as professional specialties and technical occupations in the product and process research and development operations; product sales and service; all forms of management and administrative functions; the sales, clerical and other support fields; and many of the business services often purchased as consulting or professional services by small firms, as well as those on the factory floor.

Data in Table 1 describing job distributions for all establishments in the manufacturing sector of the U.S. economy for 1986 confirm that the broad category of production workers, including those performing the complementary tasks of materials handling and machinery and equipment operation, maintenance and repair, does account for one-half to three-quarters of all manufacturing workers in the various two-digit, SIC industries. The matrix also verifies that a wide variety of other occupations are required by manufacturing establishments. As can be observed, the relative numbers of these different types of occupations vary substantially by major manufacturing industry.

The question addressed in this study is whether manufacturing in Oklahoma affords similar occupational opportunities (and, by implication, the same income-earning potential) for state workers. Has state economic policy provided an environment for a mix of industries and a pattern of business functions within firms—management, product and process research, marketing, fabrication, assembly, etc.—which generates an occupational structure similar to the national pattern? Whether similar work is paid a comparable wage and other aspects related to worker compensation and mobility are not addressed.

Unfortunately, we do not currently have the required statistical observations to conclusively answer these questions. However, the results of the analysis to follow indicate that Oklahoma probably now offers a range of occupations with relatively fewer management, technical and professional occupations and relatively more operations and production workers than the national average. Furthermore, differences between Oklahoma and national averages to be derived from analysis of the 1990 population census when finally completed are likely to be substantial.

The source of the expanding gap predicated here is a combination of predictions for an ongoing net shrinkage in those industries with the higher skilled occupations and a little-to-no-change in the pattern of business operations yielding relatively large numbers of production workers within industry classifications when compared with national structures. Given the relatively small share of manufacturing employment in the state total, however, this structural difference is only a small part of the explanation of the state's widening gap in per capita personal income.

The Research Framework

A framework for the analysis of occupational structures can be developed as a simple model relating the different types of jobs (used interchangeably with occupations) to the mix of industries operating in the economy.

TABLE 1

Occupational Shares in U.S. Manufacturing Industries by Major Occupational Categories 1986

Industry	All occupations	Managers and administrative workers	Professional, paraprofessional, and technical workers	Sales and related workers	Clerical and administrative support workers	Agriculture, forestry, fishing, and related workers	Production, construction, operating, maintenance, and material handling workers	Service workers
		Percent distribution of employment in manufacturing industries by major occupational group, 1986						
Total	100.0	6.3	11.8	3.2	11.6	0.5	65.0	1.6
Food and kindred products	100.0	5.2	3.9	4.8	9.1	1.3	72.3	3.4
Tobacco products	100.0	5.5	8.7	5.6	7.3	.1	70.7	2.1
Textile mill products	100.0	3.4	2.6	1.1	8.1	.0	83.1	1.7
Apparel and other textile products	100.0	3.0	1.6	1.7	8.9	.0	83.7	1.0
Lumber and wood products, except furniture	100.0	4.7	2.5	2.0	6.7	9.1	73.6	1.3
Furniture and fixtures	100.0	4.6	3.1	2.4	9.4	.0	79.3	1.2
Paper and allied products	100.0	5.3	6.6	2.9	9.7	.5	73.6	1.3
Printing and publishing	100.0	7.5	13.4	10.8	22.5	.0	44.6	1.2
Chemicals and allied products	100.0	9.0	19.7	4.5	14.9	.3	49.7	2.0
Petroleum refining and related industries	100.0	6.8	20.3	2.8	12.7	.0	56.1	1.3
Rubber and miscellaneous plastics products	100.0	5.4	4.7	2.1	8.7	.0	77.6	1.4
Leather and leather products	100.0	4.2	2.0	2.4	9.9	.0	80.3	1.2
Stone, clay, glass, and concrete products	100.0	5.9	4.2	2.6	9.2	.0	77.0	1.1
Primary metal products	100.0	4.7	6.2	1.6	8.2	.0	77.5	1.7
Fabricated metal products	100.0	6.5	6.2	2.5	10.1	.0	73.4	1.3
Machinery, except electrical and transportation equipment	100.0	8.3	17.1	3.2	13.2	.0	56.9	1.2
Electrical and electronic machinery	100.0	7.6	22.8	2.0	12.0	.0	54.3	1.3
Transportation equipment	100.0	5.2	21.3	.9	9.7	.0	61.0	1.9
Instruments and related products	100.0	9.3	21.4	3.5	15.4	.0	48.7	1.6
Miscellaneous manufacturing industries	100.0	7.3	5.1	4.3	14.2	.0	68.0	1.2

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Occupational Employment in Manufacturing Industries," Bulletin 2312, August, 1988.

At the level of the U.S. national manufacturing sector, let the current year (t) jobs observed (J^u_t) be a combination of the data array of occupations of each type required by industries of each type (M^u_t) multiplied by the proportionate shares of each type of industry in the manufacturing sector (I^u_t):[1]

$$J^u_t = M^u_t \times I^u_t.$$

The definition of the jobs offered in the Oklahoma manufacturing sector would have all corresponding coefficients suitably reinterpreted with the regional data; hence, jobs in Oklahoma (J^o_t) would be a combination of the regional occupation-by-industry matrix and the state's pattern of industrial shares in total manufacturing:

$$J^o_t = M^o_t \times I^o_t.$$

With these definitions, differences in occupational structures can be partitioned into two effects corresponding to differences in the state and national mix of manufacturing industries and differences in the state and national arrays of occupations required by industry:

$$J^o_t - J^u_t = M^u_t(I^o_t - I^u_t) + (M^o_t - M^u_t)I^o_t.$$

Occupational differences due to the first term on the right may be said to be caused by *industry-mix differences*, whereas those from the second term are caused by *occupational-pattern differences*.

By analogy, differences that occur in either the state or national observed occupational offerings from one point in time to another can be partitioned into similar changing patterns in industry mix and occupations-by-industry over time.

Analysis

With the 1986 matrix of occupations-by-industry recently made available, the first hypothesis to be tested is whether differences in U.S. and Oklahoma industry-mix distributions lead to differences in occupational requirements. For this test, full and part-time employment levels for 1987 estimated by the Bureau of Economic Analysis were collected for the state and nation. Table 2 contains these data and the calculated relative shares and differences.

Oklahoma's industrial share substantially exceeds the national share in the Machinery, Petroleum Products and Stone, Clay and Glass industries and to a lesser extent in Rubber and Plastic Products and Transportation Equipment, even after severe contractions in the 1980s. The state falls below national levels to a considerable degree in the Textile, Chemical, and Electronic industries. Thus, it is reasonable to expect that industry mix differences might lead to significant differences in occupational requirements, even if the state and national occupation-by-industry requirements were identical.

When the U.S. industry mix for 1987 full and part-time employment is applied to the occupation-by-industry matrix of 1986 (Table 1), the one-year

TABLE 2

Full and Part-Time Employment, Level and Distributive Shares, Oklahoma and the United States 1987

SIC Industry[a]	1987 U.S. Employment (1,000)	1987 OK Employment (#)	U.S. Distribution (%)	OK Distribution (%)	Difference OK-U.S.
Food	1,633.0	14,270	8.3	8.8	0.5
Tobacco	55.5	17	0.3	—	-0.3
Textiles	734.0	1,075	3.8	0.7	-3.1
Apparel	1,145.3	8,509	5.9	5.3	-0.6
Lumber	851.5	3,337	4.4	2.1	-2.3
Furniture	535.7	1,867	2.7	1.1	-1.6
Paper	683.0	3,332	3.5	2.1	-1.4
Printing	1,615.0	12,375	8.2	7.6	-0.6
Chemicals	1,034.2	3,440	5.3	2.0	-3.3
Petroleum	162.8	7,160	0.8	4.4	3.6
Rubber/Plastics	825.0	10,611	4.2	6.6	2.4
Leather	148.7	479	0.8	0.3	-0.5
Stone/Clay/Glass	641.5	10,747	3.3	6.7	3.4
Primary Metal	743.2	3,959	3.8	2.5	-1.3
Fabricated Metal	1,419.4	14,381	7.2	8.9	1.7
Machinery	2,052.1	30,527	10.5	18.9	8.4
Electronic Equipment	2,095.5	9,211	10.7	5.7	-5.0
Transportation Equipment	2,048.4	20,245	10.5	12.5	2.0
Instruments	690.6	2,695	3.5	1.7	-1.8
Miscellaneous Manufacturing	451.2	3,414	2.3	2.1	-0.2
TOTAL	19,565.6	161,444			

Source: U.S. Department of Commerce, Bureau of Economic Analysis, computer data tape.

[a] For full description see Table 1.

change in employment and differences in definitions for the two data sources prove to be minor. The U.S. share of different occupations from this calculation, as shown in Table 3, is nearly identical to the national average for all manufacturing shown in Table 1.

The surprising result is that the calculated distribution for all Oklahoma manufacturing industries is *substantially the same* as the national average. The hypothetical state distribution, as shown in the second data column of Table 3, never differs from the national distribution by more than a few tenths of a percentage point. Evidently, industry mix differences would lead to only insignificant occupational differences within the manufacturing sector *if* Oklahoma and U.S. national job requirements by industry were identical. [Recall, however, that this data refers only to the approximately 165,000 workers in the manufacturing industries and not the 1.5 million total state employment.]

TABLE 3

Hypothetical Distribution of Occupations within Oklahoma's Manufacturing Industries, Based on National Occupation-by-Industry Coefficients 1987

	Occupations in Manufacturing Industries		
Occupations in Manufacturing	United States 1987 (%)	Oklahoma 1987 (%)	U.S. Annual Growth Rate 1983/86 (%)
Managers and administrative workers	6.25	6.38	3.9
Professional, paraprofessional, and technical workers	11.66	11.96	3.8
Sales and related workers	3.26	3.25	4.2
Clerical and administrative support workers	11.59	11.63	0.8
Agriculture, forestry, fishing and related workers	.54	.34	0.7
Production, construction, operating, maintenance, and material handling workers	65.10	64.88	0.6
Service Workers	1.57	1.54	-2.2
ALL OCCUPATIONS	100.00	100.00	1.2

Source: Employment distributions for Oklahoma and U.S. from U.S. Department of Commerce, Bureau of Economic Analysis, data tape, Full and Part-time Employment. Occupation by Industry matrix, U.S. Department of Labor, Bureau of Labor Statistics, "Occupation Employment in Manufacturing Industries," Bulletin 2312, August 1988.

Since industry-mix shares are obviously different in Table 2, the equal distributions of occupational shares, as calculated for this experiment, result from a balancing of effects. Oklahoma's machinery production, for example, has a large occupational share in professional and technical workers and is low in production workers, but the relatively small electronic equipment and components sectors also has a job distribution that is biased in this same way. It is simply a surprising fact that these pluses and minuses are so evenly balanced in this hypothetical calculation.[2]

But, are the occupations required by product producers *within a given manufacturing industry*, at the 2-digit SIC level, the same in Oklahoma as in the rest of the country? If this is not the case, then the conclusion that actual industry mix differences result in almost no net differences in the aggregate state and national occupational shares would be invalid.

To test for the similarity of *within-industry* occupational patterns, data according to still another classification system were obtained for the U.S. and Oklahoma from the 1980 Census of Population.[3] These data are summarized in Table 4 in terms of percentage point differences between the Oklahoma distributive shares of occupations by industry and those of the U.S.

The first row of data supports the previous conclusion that aggregate occupational differences between the Oklahoma and the U.S. manufacturing sectors exist to some degree; but they are, relatively speaking, quite minor. Oklahoma, in the 1980 Census, is shown to have 1.5 percentage points fewer occupations in the very broad category of professional specialties (engineers, health workers, teachers, researchers, etc.); 1.7 percentage points more precision production, craft and repair jobs; and, 0.9 percent more operators, fabricators and laborers. Other types of work differences are even more minor.

A closer look at the percentage point differences in occupational patterns, however, reveals some very substantial differences between state and national shares within certain industries and for certain occupational categories. The aggregate of all durable goods, for example, would appear to be rather more locally unique than the nondurable goods sector. Food and Textile Mill products in Oklahoma need relatively large numbers of craftsmen while Apparel is definitely operations or assembly oriented in the state. Several occupations in the Chemicals industry differ substantially in Oklahoma from their national counterparts, with especially high concentrations of executives and sales occupations. The "Other Durable," residual category, which presumably is mostly Petroleum Refining and the state's small Leather industry, is the most unique with relatively large executive/managerial and clercial/support categories. This certainly would not be inconsistent with a pattern of headquarters operations of oil companies located in the state.

The uniform and substantial occupational difference between state and national durable goods industries are even more striking.[4] With the minor exception of the small Lumber and Furniture industry, *all durable goods sectors in Oklahoma require substanitally larger proportions of operators, fabricators and* *laborers and substantially fewer professional specialties.* Technicians tend to be under-represented in the Electronic and Transportation areas and craftsmen are somewhat heavily utilized in selected durable goods industries—especially, Electronics and Electric Equipment and Aircraft and Aircraft Parts.

Conclusions

Comparative analysis of the occupation-by-industry data for Oklahoma and the U.S. for periods as divergent as the early 1970s and late 1980s leads to the conclusion that occupational choices available to employees in Oklahoma and the whole U.S. economy would not be substantially different if *within-industry* occupational requirements were similar. The 1980 Census of Population data, however, reveal that these occupational requirements within industries did differ substantially that year and they differ in a consistent pattern, especially for durable goods industries. Generally speaking, Oklahoma industry is more production, operations and assembly oriented and less managerial, marketing and research and development oriented.

Since the 1980 Census of Population data in Table 4 indicate that actual occupational offerings by Oklahoma manufacturing establishments were similar to the national pattern in that year, the result must be a matter of industry mix weights causing a netting out of substantial differences among the list of industries. In fact, a closer examination of Table 4 indicates that most of the balancing occurs between the Petroleum Refining and related products (Other nondurables and Chemicals) and all durable goods, except for Lumber and Furniture. The low ratio of operating workers in "other nondurables" is the only significant offset to the uniformly high rates elsewhere. Similarly, only the relatively high levels of managers and professionals in the Chemicals and "other nondurables" industries keep Oklahoma from being substantially below national levels in these education-based occupational categories.

Without current census data we do not know today's actual distribution of occupations in Oklahoma manufacturing. Nevertheless, it is interesting to speculate about what the true pattern really is and how a comparison of state and national occupational patterns in 1990 might differ from a decade earlier.

TABLE 4

Difference in Occupational Shares by Industry[a]
Oklahoma Minus the United States
1980

	EXEC	PROF	TECH	SALE	CLER	SER	FARM	CRFT	OPER
Manufacturing	-0.45	-1.49	-0.33	0.37	-0.72	0.06	-0.02	1.69	0.89
Nondurables	0.59	0.45	0.09	1.05	0.13	0.24	-0.02	1.04	-3.57
Food Products	-0.37	-0.86	-0.59	0.66	-1.29	-0.53	-0.11	2.26	0.83
Textile Mill Products	-1.63	-0.93	0.67	2.47	-3.05	-0.21	0.09	2.59	0.01
Apparel	-2.01	-0.42	-0.28	-0.54	-2.86	0.59	0.05	-0.76	6.22
Paper & Products	0.35	-1.79	-0.14	0.84	-2.03	0.15	-0.06	0.88	1.79
Printing/Publishing	-0.04	0.73	-0.12	4.64	-2.12	-0.34	0.03	-1.27	-1.52
Chemicals	5.37	-3.48	-2.67	6.00	-2.93	-0.89	0.11	0.63	-2.15
Rubber & Plastics	-2.39	-0.11	-0.60	-0.61	-1.16	1.01	0.02	1.80	2.03
Other Nondurable	5.57	6.70	4.65	-0.81	10.64	1.37	-0.07	-0.32	-27.73
Durable Goods	-1.04	-2.63	-0.62	0.06	-1.17	-0.02	-0.04	1.81	3.65
Lumber & Furniture	-0.71	-0.38	-0.26	-0.71	-3.14	-0.06	2.20	5.25	-2.17
Stone, Clay & Glass	-1.83	-1.54	-0.80	-0.05	-1.31	0.15	0.15	0.88	4.35
Primary Metal Industry	0.67	-1.77	0.70	0.95	-1.63	0.92	-0.05	-3.87	4.08
Fabricated Metal	-0.78	-0.63	1.00	0.06	-2.42	-0.31	-0.04	-1.14	4.26
Nonelectrical Machinery	-0.96	-2.46	-0.70	-0.25	0.44	-0.03	-0.01	1.87	2.10
Electrical/Electronic	-3.75	-4.23	-2.42	-0.35	-3.87	0.08	-0.05	6.64	7.97
Motor Vehicles/Parts	-0.63	-3.37	-0.73	0.23	-1.15	0.32	-0.03	-2.66	8.03
Aircraft/parts	-2.92	-12.24	-2.93	0.42	-0.05	0.30	-0.04	9.03	8.44
Other Transportation Equipment	3.40	-3.77	-1.51	0.22	-4.55	1.35	-0.06	-14.60	19.53
Other Durables	-0.66	-0.16	0.48	1.76	-0.88	-1.09	-0.06	1.16	-0.54

Source: U.S. Department of Commerce, Bureau of the Census, "1980 Census of Population, Detailed Characteristics." Volume D, Oklahoma and United States.

[a] Each entry is the Oklahoma share (as a percentage) for that occupation and industry minus the corresponding U.S. share.

U.S. Census Occupation Classification

EXEC: Executive, Administrative, and Managerial Occupations
TECH: Technicians and Related Support Occupations
SALE: Sales Occupations
CLER: Administrative Support Occupations, Including Clerical
SER: Service Occupations
FARM: Farming, Forestry and Fishing Occupations
CRFT: Precision Production, Craft, and Repair Occupations
OPER: Operators, Fabricators, and Laborers

From the analysis of occupational patterns and industry mix differences shown here, it would appear reasonable to conclude that real regional differences do exist. As the petroleum-product-based activity diminishes in relative importance in the Oklahoma manufacturing sector, it is likely that the occupational offerings in the state are increasing most in the operating and assembly skills.

Since the industry mix of Oklahoma establishments has tended to move Oklahoma occupations toward the national pattern, the cause of the hypothesized growth in this disparity lies in the business structure and functional purposes of establishments within industries. State economic policy evidently favors the attraction and growth of the assembly subsidiaries over the management headquarters and the research and development operations. In fact, in light of this data, it may be questioned whether even the limited success of recent high technology industry growth has helped move the occupations utilized by the state's industries closer to that of their peer organizations. Setting state policy to favor a desired pattern of occupational mix might need to be a state goal as well as simply the level and/or growth of state employment.

Notes

[1] Mathematically, J is a column vector of proportionate shares of all manufacturing workers in each occupation. M is a matrix of occupation per industry coefficients and I is a column vector of proportionate shares of each industry in total manufacturing employment.

[2] A similar calculation of U.S. and Oklahoma job requirements was made for 1973 using the 1977 national occupation-by-industry matrix (the earliest available) and the relevant industrial mix shares. The occupational distributions in both regions changed substantially over the 13 years (mainly from a reduction in the share of production workers), but the differences in state and national requirements were as small in 1973 as those reported here for 1987.

[3] This work was necessary because of the apparent unavailability of the desired occupation-by-industry matrices on a state level basis.

[4] Oklahoma's Rubber and Plastics Products industry appears to more closely fit the durable goods than the nondurable goods sector. Perhaps this is because of the dominance of the production of tires and tubes over the plastic products component of the industry.

Gerald M. Lage is Professor of Economics at Oklahoma State University, Stillwater, Oklahoma.

The Single European Act in 1992: Prospects for Success and Influences on the U.S.A. and Oklahoma Economies[1]

A.J. KONDONASSIS

Introduction

HISTORIANS GENERALLY AGREE that the U.S. with its forward looking Marshall Plan aid program, planted the seeds for European unity. At the end of the Plan in 1952 two European leaders, Robert Schuman and Jean Monnet took imaginative initiatives which led to the establishment of the European Steel and Coal Community among the countries of Belgium, Luxembourg, the Netherlands, the Federal Republic of Germany, Italy and France. The reality of this Community and the resulting experience of a close working relationship were important factors leading to the signing of the Treaty of Rome in 1957 and to the genesis of the European Economic Community (EEC) in 1958.

The Treaty of Rome[2] represents a comprehensive document which articulates the goals of the EEC and provides for the establishment of several institutions designed to help implement these goals. The ultimate goal of the Treaty of Rome is to establish a common market among the member states within a transitional period of 12 years. To accomplish this the Treaty provides for a number of things including:

(1) the elimination of custom duties and of quantitative restictions in the import and export of goods;

(2) the establishment of a common customs tariff;

(3) the removal of barriers to the free movement of people, services and capital;

(4) the adoption of a common agricultural policy.

The institutional framework established to attain the above comprises the European Parliament, the Council, the Commission and the Court of Justice.

Thirty years later a brief review of the attainments of the EEC reveals the following: Europe has become a more peaceful place to live in as a political reconciliation between France and Germany has occurred and as such a political and social consensus among the members seems to have emerged. In the economic arena, tariffs between members have been eliminated and the volume of trade has expanded. There has been a free movement of labor and some liberalization of capital movements. A common external trade policy and a common agricultural policy have been established. Over the years, the group of the original six members, Belgium, the Federal Republic of Germany, France, Italy, Luxembourg and the Netherlands has expanded to twelve. In 1973, Denmark, Ireland and the United Kingdom became members. In 1981, Greece joined and in 1986 Spain and Portugal became the latest members of the EEC.

During the last thirty years the EEC has become a powerful group in world trade. For instance, it is estimated that in 1987 EEC exports constituted 20 percent of the world exports.[3, 4] Notwithstanding these developments, the EEC has also been confronted with a number of problems. Among them are the following:

(1) The present 12 member countries of the EEC represent divergent sizes, standards of living, cultures, currencies and languages. As a result, conflicts on various policy issues have been rather common.

(2) A second major difficulty is that, partly because of the above differences, the goal of establishing a common market has not been met. Thirty years later the EEC is a loose customs union with a plethora of intra-EEC frontier trade barriers including import quotas, non-uniform standards and regulations.

(3) Another area of concern is the

Common Agricultural Policy (CAP). The Treaty of Rome rationalizes the CAP on the grounds that it will increase agricultural productivity and the standard of living of EEC farmers and will guarantee reasonable prices for the consumers. Over the years, however, implementation of the CAP has resulted into a system of generous import levies and export refunds. The levies, the critics of the CAP argue, are aimed at keeping non-EEC agricultural products out of the EEC and the export refunds are designed to encourage an increase in EEC's world share of agricultural exports. The implementation of this system also represents a substantial burden on the EEC budget and accounts for the large annual EEC agricultural surpluses in wheat, barley, sugar, beef, wine and dairy products.

The EEC Heads of States, in recognition of that the EEC of 12 member states did not accomplish an integrated market, approved in Milan, Italy in June 1985 a *White Paper* aimed at completing the internal single market. The result was an extensive legislative program designed to achieve a single market without frontiers by 1992. This program was ratified in 1987 and has been referred to as the Single European Act.

The Single European Act

The Single European Act is an amendment of the 1957 Treaty of Rome. It also represents a recommitment of the EEC to complete the internal market by 1992. It crystallized when it also became clear that the European economies needed a stimulus toward more rapid economic growth and higher levels of employment. The program encompasses about 300 points and deals with improvement in the functioning of EEC institutions, with removal of all barriers to the free movement of goods, persons, services and capital, with cooperation in economic and monetary policy and with improved cooperation in the areas of social cohesion, research and development, the environment, foreign policy and defense.

A recently completed study by Paolo Cecchini[5] attempts to quantify the costs and benefits of the EEC with and without frontiers. It focuses on market barriers arising from red tape and delays created by customs formalities, from restrictive practices in public procurement, from divergent product standards and from conflicting business and tax regulations inhibiting transborder business activity.

Microeconomically, the study estimates the cost of border formalities and red tape at 1.8 percent of the value of goods traded within the EEC. The average cost to companies of technical regulations and similar barriers to cross-border trade is valued at about 2 percent of their total expenses. Furthermore, the study estimates that industries and services which are now subject to market-entry restrictions will experience cost and price reductions of 10 percent to 20 percent in a more competitive environment. Finally, the cost savings benefits to industry from economies of scale are estimated at about 2 percent of Gross Domestic Product.

According to the study the macroeconomic influences of the Single Market are no less impressive. It is estimated that in the medium-term the downward pressures on prices and costs would result in a 6 percent cumulative decline on consumer prices; about 2 million jobs would be created; government balances would improve by about 2.2 percent of Gross Domestic Product; and EEC's external balance of goods and services would improve by 1 percent of Gross Domestic Product. Overall, EEC's Gross Domestic Product would be increased by about 5 percent.

The substantial benefits from the Single Market as outlined in the Cecchini study are premised on a number of required changes and/or reforms. Many of them are unresolved issues that have confronted EEC since its inception. These include changes and/or reforms in the Common Agricultural Policy and in the use of the structural funds. The EEC Commission has repeatedly underscored that the effectiveness of the Single Market depends in no small measure on reforms in agricultural policy (CAP). These reforms must aim to make European agriculture more competitive, to eliminate the large agricultural surpluses and to check the increase in the burden that the agricultural policy imposes on the EEC budget. In this regard the U.S. has recommended that all major agricultural subsidies be eliminated with 10 years. The European politicians view this proposal as tantamount to political suicide. They urge for more "flexibility" on the matter. In addition, the increased use of structural funds in the EEC budget to assist the less developed areas of the EEC e.g., Portugal, Ireland, Greece, parts of Spain, the South of Italy and Northern Ireland, is also viewed as a necessary condition for a successful single market. However, West Germany's current preoccupation with helping East Germany may dilute the ability of the EC to assist these areas in the future. Other key issues that need to be addressed are monetary and fiscal harmonization, the development of internationally competitive enterprises and the avoidance of protectionism.

The Treaty of Rome in 1957 was not concerned with the goal of monetary integration. At a time of fixed exchange rates, the possibility of a common monetary policy took second place to other objectives such as a customs union and a common agricultural policy. But with the collapse of the Bretton Woods system in 1973 the Europeans have gradually recognized that floating exchange rates represented a risk and a cost to their economies which were involved in a large volume of intra-EEC trade. Thus, through a series of initiatives they eventually agreed to establish the European Monetary System (EMS) in 1979.

The primary purpose of the EMS is to promote monetary cooperation and monetary stability in Europe. It is comprised of three components: the European Currency Unit (ECU), the exchange-rate mechanism and the financial solidarity mechanisms. ECU, which is an artificial monetary unit, is calculated as a basket of set amounts of each EC currency (10 EC currencies). It is used for fixing central rates in the exchange rate mechanism and for denominating creditor and debtor balances in the process of intervention in EC currencies; also, it serves as a reserve and settlement instrument among the central banks in the EMS.[6] Although there have been a number of exchange rate readjustments among the EC currencies since 1979, and the nonparticipation of the sterling in the EMS has been a negative influence on its functioning, a substantial degree of exchange rate stability has been attained. Jacques Delors, President of the EC Commission and an ardent proponent of EC monetary union, argues that thanks to the EMS it has been possible to maintain an open trade system within the community. There is still a long way to go toward economic and monetary union. Progress to that end will depend on the completion of the internal market. At the same time the EMS has become the operational route for convergence. But now, given the objective of the Single Act for economic and monetary cooperation leading to a union, greater progress in exchange rate stability will be needed. In addition, the establishment of the ECU as a common currency, the liberalization of capital movements among the EEC countries and the creation of a European central bank are issues that will need to be moved forward. Their resolution will require, apart from coping with a myriad of technical details, a spirit of supranationalism as the transferring of monetary and fiscal authority from the national governments to European institutions takes place.

Recently, the EC Commission proposed that the twelve members gradually fold their currencies into the ECU and that a new institution the "Euro Fed" be established to coordinate monetary policy. This is a formal proposal of the EC Commission which will become the basis of discussion and debate in the future. It must be underscored that the United Kingdom's position on monetary union is much more evolutionary that the above proposal.

Furthermore, the proposed East-West Germany unification poses some interesting questions. The promise of exchange of East German marks to Deutsche marks, possibly at the rate of exchange of 1 to 1 and the need for substantial assistance by West Germany induce speculation concerning the impact of this eventuality on the economic health of West Germany and on Europe 1992. The associated monetary expansion in West Germany is likely to produce inflation and in order to fight it higher interest rates. Given the key role of the Deutsche mark in the EMS both of these developments will strain the EMS which is intended to be the basis of European monetary union in the future. In fact, deterioration of the value of the Deutsche mark may mean the end of the EMS.

Another issue is the establishment of uniform value added taxes (VAT) among the member countries. Currently there is wide variability in these taxes. Some countries have high VAT and others quite low.[7] Some depend on VAT for a large source of their revenues and others not so much. To reduce the variability and the height of these taxes and to move toward fiscal harmonization is not going to be easy. However, without such changes tax evasion would be encouraged and the smooth functioning of the Single Market would be jeopardized.

A common assumption of the establishment of a Single Market of 320 million people is that it will induce the formation of large-size enterprises via mergers and consolidations and will bring about corresponding economies of scale to these firms. Notwithstanding the possibility that these firms may become internationally competitive, there are a number of potential problems associated with this eventuality. One of them is that the emergence of large European firms may have deleterious effects on the large numbers of small-size firms prevalent in the countries of Southern Europe. Many of these small firms have operated in an environment of red tape and bureaucracy for quite some time. They are local in scope and undercapitalized. Located in the periphery, they are not the beneficiaries of externalities as the firms of the center are, i.e., Northern Europe. What it comes down to is whether the small businesses of Southern Europe, under the impetus of the Single Market, will be able to restructure and become competitive by 1992. If not, would they be eliminated or would they seek the protection of their governments which in turn may ask for exceptions?

In this connection, Pierre Pescatore, former Judge on the Court of Justice of the European Communities, expresses his concern about the effectiveness of the Single Act by pointing out that a number of exceptions are allowed in the Final Act for unilateral protective measures under the guise of "safety" and "protection of the environment."[8] He further emphasizes that unilateral reservations about the Single Act have already been expressed and recorded by Denmark, Greece and Portugal.[9] In this regard, it should be pointed out that the Final Act, which is a document attached to the Single Act, contains twenty declarations. Some of them are interpretations of the Single Act and others are reservations by individual countries regarding the Single Act. Given recent developments it is also quite conceivable that declarations of concern from the small northern European countries, e.g., Netherlands, Belgium, Denmark, Luxemborg may further delay Europe 1992. To a substantial minority in these countries the high likelihood of German reunification is stirring up fears of domination by the economic and political power of the new and larger Germany. These declarations are likely to generate difficulties in the timely implementation of the Single Act.

A related issue has to do with the so-called qualified majority system which the Single Act has introduced to take the place of the unanimity rule of the past. According to this new system, each member country is allocated a given number of votes according to its size. For instance, France, Italy, Germany and the United Kingdom are assigned 10 votes each. Belgium, Greece, Netherlands and Portugal have 5 votes each, Spain has 8 votes, Denmark and Ireland 3 votes each, and Luxembourg has 2 votes. Decisions can be made by a minimum of 54 votes out of the possible 76. It takes 25 votes to block a motion by a large country. Given the differences in the economic and social structure among the 12 members, the likelihood for deadlocks is real.

Implications for the U.S. And Oklahoma Economies

At this juncture, it is not clear whether Europe 1992 would be open or restricted to non-European firms, financial or non-financial, and whether it will discriminate against U.S. made products. A great deal of speculation exists on these issues. In this regard, some argue that Europe 1992 would be a Fortress Europe and others that it would be a Partnership Europe. The fears of a protectionist Europe are premised on that all the documents dealing with the Single Market make no references or provide no specifics on the stance that Europe 1992 will take regarding non-member countries.

However, one thing is clear from the data in Tables 1-4, that U.S. and Oklahoma trade with the European Economic Community represent an important economic activity. More specifically, the following are worth noting:

(1) U.S. exports with the EEC as a percent of total U.S. exports were significant, but relatively constant, 23.88 percent in 1981 and 23.95 percent in 1987.

(2) Manufactured exports to the EEC as a percent of total U.S. exports to the EEC increased from 67.88 percent in 1981 to 79.04 percent in 1987, while agricultural exports decreased from 19.64 percent in 1981 to 11.32 percent in 1987.

(3) Beginning in 1984 the U.S. experienced persistent and increasing trade deficits with the EEC.

(4) The data show that Oklahoma agricultural exports were $342.2 million and manufactured exports about $843 million in 1987.[10] Of the $843 million

TABLE 1

U.S. Merchandise Trade
(billions of dollars)

World

Year	Exports: Total	Exports: Manufactures	Exports: Agricultural Products	Imports: Total	Imports: Manufactures	Imports: Agricultural Products
1981	$238.68	$171.74	$43.81	$273.35	$156.38	$16.80
1982	216.44	155.30	37.01	254.88	158.08	17.28
1983	205.63	148.46	36.45	269.87	178.44	18.10
1984	223.99	163.59	38.23	346.36	241.82	21.58
1985	218.82	167.91	29.61	352.46	269.47	22.02
1986	226.82	179.93	26.61	382.96	308.86	23.11
1987	252.86	200.04	29.13	424.08	337.74	22.62

Source: U.S. Department of Commerce, *United States Trade, Performance 1987*, June 1988.

TABLE 2

U.S. Merchandise Trade
(billions of dollars)

European Economic Community (12)

Year	Exports: Total	Exports: Manufactures	Exports: Agricultural Products	Imports: Total	Imports: Manufactures	Imports: Agricultural Products
1981	$57.01	$38.70	$11.20	$45.58	$34.99	$2.84
1982	52.36	34.58	10.39	46.41	35.09	3.12
1983	48.43	33.56	9.18	47.87	37.24	3.39
1984	50.49	36.72	8.19	63.41	50.91	4.08
1985	48.99	36.84	6.40	71.61	59.75	4.49
1986	53.15	40.74	6.71	79.52	69.14	4.63
1987	60.57	47.88	6.86	84.87	74.02	4.66

Source: U.S. Department of Commerce, *United States Trade, Performance 1987*, June 1988.

manufactured exports, about 31 percent, or $266 million were with the EEC. In addition, as the U.S. Department of Commerce estimates, a substantial amount of Oklahoma sales of manufactures to other U.S. industries became inputs of manufactures for export by these industries. For instance, these Oklahoma indirect export sales were estimated at $1.2 billion in 1984.[11] If we assume that about 25 percent of Oklahoma agricultural exports have been sold to the EEC and that indirect export manufactures in 1987 were about equal the amount of direct export sales ($266 million), as they were in 1984, then the total export activity of Oklahoma (agricultural and manufactures exports) with the EEC can be estimated to be about $618 million.[12]

(5) Both in 1984 and in 1987, Oklahoma's largest manufactured export earnings were generated by the non-electric machinery industry (more than one-third).

(6) Both in 1985 and in 1987, wheat exports represented the most important agricultural export of Oklahoma. Wheat exports contributed about 75 percent in 1985 and about 57 percent in 1987 of agricultural export earnings.

Given the above information, it is obvious that what will happen to Europe in 1992 will be quite important to both the U.S. and Oklahoma economies. Specifically, possible changes to the Common Agricultural Policy will have direct relevance to Oklahoma agriculture.

If the Single European Act is implemented and Europe 1992 becomes an open single market of 320 million people, U.S. firms which operate in it are likely to experience substantial benefits as the Cecchini study has shown. These may be the result of the following: (1) economies of scale; (2) the new competitive environment of Europe 1992; (3) cost reductions because of the adoption of uniform standards, certification procedures and regulations; (4) cost effective advantages because of the development of EEC-wide networks of production and distribution. U.S. banks licensed to operate in Europe 1992 may also experience lower costs and higher profits. Large and efficient U.S. banks may do well against the small and less competitive European banks, especially in the small European countries.

If Europe 1992 is protectionist, U.S. and Oklahoma exports to the EEC are likely to be discriminated against. Discrimination may take the form of standards based on European practice and experience and of legislation which may require that the output of goods and services traded freely in the Single Market include total or partial inputs from European firms. A major source of EEC protectionism which affects Oklahoma wheat exports is the Common Agricultural Policy. Given that the CAP has been a champion of protectionism, if no reforms are made, continuation of subsidies, input barriers, quotas and other trade distorting barriers is certain. It was mentioned before that as Europe moves toward a

TABLE 3

Oklahoma Manufactures Exported to the European Economic Community 1987 (millions of dollars)

Major industries	Dollars	Percent
Food Products	$ 2.37	.89%
Apparel Products	1.26	.47
Furniture	5.54	2.08
Paper Products	12.57	4.72
Chemical Products	77.81	29.18
Petroleum Refining	3.85	1.44
Rubber & Plastics	3.45	1.30
Primary Metal Products	2.64	.99
Fabricated Metal Products	3.44	1.29
Non-Electrical Machinery	10[illegible]4	39.99
Electric & Electronic Machinery	1[illegible]4	4.52
Transportation Equipment	15.27	5.73
Scientific Instruments	11.42	4.28
Other	8.36	3.12
Total	266.66	100.00

Source: U.S. Bureau of the Census, 1987 (computer tape).

TABLE 4

Oklahoma Major Agricultural Exports (millions of dollars)

	1985	1986	1987
Wheat	$353.2	$203.6	$196.3
Soybeans	11.8	11.6	13.7
Peanuts	10.1	9.7	11.7
Cotton	27.7	14.7	35.1
Live Animals & Meat	18.1	20.6	24.7
Hide & Skins	17.5	20.0	24.1
Poultry	3.2	3.5	6.7
Fats	9.0	7.3	6.8
Other	20.2	20.0	23.1
Total	470.8	311.0	342.2

Source: U.S. Department of Agriculture, *Foreign Agricultural Trade of the U.S.*, March/April, 1988.

Single Market and mergers and consolidations take place, the small-size and relatively inefficient firms of the less developed areas of the EEC may attempt to slow down their integration in order to protect themselves from intra-market and extra-market competition. In this regard, all indications are that legislation toward the creation of the Single Market, because of the fears of national governments on local industries, is moving slowly.

Various spokespersons in Brussels have tried to allay the fears of a Fortress Europe by stressing the fact that the EEC is the world's largest exporter, i.e., about one-fifth of world trade, and because of that it has a vested interest in free trade.[13] U.S. government and business officials are concerned that the EC's new regulations to curtail Japanese auto and electronics imports will adversely affect U.S. exports also. Apropos a recent directive of the EC requiring that half of all TV time be alloted to European productions drew strong U.S. protests. As a result the EC has softened its stand converting its requirement to a recommendation. In a recent visit to Washington, D.C., EC Commission President Jacques Delors has underscored the importance and desirability of a true and friendly partnership with the U.S.A.[14] Notwithstanding these reassurances, there appears to be little doubt that the benefits of Europe 1992 will not be given away to all and especially to those whose markets are closed to Europe. A likely scenario is the strategy of reciprocity, that is, the benefits of Europe 1992 to firms of non-members will be conditional upon a guarantee for similar opportunities in those firms' own countries.[15] Given the fact that there is a certain degree of ambiguity with the concept of reciprocity, attempts to define it, especially as it pertains to financial firms, include the following possibilities.

(1) Reciprocity may mean that the treatment of non-member firms in the EEC will mirror the treatment the EEC firms receive in other countries. In this regard, if financial regulations in the U.S. do not correspond to those of the EEC the mirror approach may prove discriminating to U.S. firms in the EEC. To avoid this, the U.S. will have to change financial regulations to mirror EEC practices in order for its firms to be given equal access to Europe 1992.

(2) Reciprocity may mean that non-member firms will be accorded national treatment in the EEC. This implies that U.S. banks will be treated the same way as EEC banks. This approach will make it possible for U.S. banks to compete equally with the EEC banks throughout the Single Market.

(3) Rules of reciprocity may not be applicable to non-member firms which are already operating in the EEC.

In the final analysis, the challenge facing the EEC and its trade partners, e.g., the U.S.A., is to help accentuate the positive aspects of the Single Market and to enter into discussions and/or negotiations in order to avoid the adoption of standards and restrictive practices which may lead to the establishment of a protective wall. In this connection, increased understanding of the workings of the EEC and vigilance on developments leading to the Single Market is necessary. The possibility for appropriate official action must be kept open.

Conclusions

The Single European Act represents a recommitment to the general goals of the Treaty of Rome and a concerted effort to amend it in order to attain an integrated Europe. The potential benefits of the Single Market, both on the micro and macro levels, to member and non-member countries e.g., the U.S.A., may be substantial. However, these potential benefits are premised on a number of changes and/or reforms in areas such as agricultural policy, development of the less developed areas of the EEC, monetary and fiscal harmonization and international openness and competitiveness. In turn, the implementation of these changes depends on the political will of the members to act in unison. If there are differing perceptions in the distribution of these benefits among the member countries, national concerns leading to exceptions may dilute European initiatives, and the required changes may be postponed or delayed. Recent developments associated with the German reunification may dilute the ability of the EC to assist effectively the less developed areas of the community, may undermine the EMS and raise the level of concerns about German domination among the small countries of the EEC. If these prove to be the case, the establishment of a Single Market and of an integrated and openly competitive Europe may continue to be an elusive goal with adverse influences on internal and external trade, and on U.S. and Oklahoma exports to the EEC. In that event, Europe, and the trading community at large, may have to be satisfied with a half loaf rather than a full loaf, at least in the short run. Thus, a loose customs union or free trade area may continue until Europe attains greater social and economic cohesion and learns to embrace and practice supranationalism.

Notes

[1] A modified form of this article appeared in *Oklahoma 2000*, 1990.

[2] *Treaties Establishing the European Communities*, abridged edition (Luxembourg: Office for Official Publications of European Communities, 1987), pp. 125-126.

[3] EC Office of Press and Public Affairs, *European Community News* (Washington, D.C., October 20, 1988), pp. 1-7.

[4] See Eurostat, 1988.

[5] Paolo Cecchini, *The European Challenge, 1992* (Aldershot, England: Wildwood House, 1988), 3-127.

[6] European Affairs/Dossier, "The European Monetary System," *Europe* (December 1987): 22-25.

[7] For instance, a liter of pure alcohol in the United Kingdom is subject to 24.83 ECUs in tax, in France 11.49 ECUs and in Greece .48 ECUs.

[8] Pierre Pescatore, "Some Critical Remarks on the Single European Act," *Common Market Law Review* (1987): 12.

[9] *Ibid.*, p. 17.

[10] See U.S. Bureau of the Census, 1987 (Computer Tape).

[11] U.S. Department of Commerce, "U.S. Manufactured Exports and Export-Related Employment," 1984.

[12] Because indirect export sales are involved in both the agricultural and manufactured exports of Oklahoma, estimates must be viewed as tentative.

[13] EC Office of Press and Public Affairs, *European Community News* (Washington, D.C., October 20, 1988), p. 1.

[14] Carola Kaps, "Delors Proposes New Partnership with U.S.," *Europe*, (July-August 1989): 14.

[15] EC Office of Press and Public Affairs, *European Community News* (Washington, D.C., October 20, 1988), p. 1.

A.J. Kondonassis is a David Ross Boyd Professor of Economics, The University of Oklahoma, Norman, Oklahoma.

U8190-1 A

OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
HE UNIVERSITY OF OKLAHOMA

CONGRESSIONAL INFO. SERVICE/SRI
ATTN: ROBERTA B. MASON
4520 EAST-WEST HIGHWAY
BETHESDA MD 20814

ISSN 0030-1671

July 1990

VOL. 58, ISSUE 7

SUMMARY OF INDICATORS

Category	4 Mos. '90	4 Mos. '89	April '90	Percentage Change 4 Mos. '90/'89	Percentage Change April/March '90
Personal Income (Monthly Average)					
Unadjusted ($000,000)	4,044	3,752	4,079	7.8	0.3
Adjusted for CPI ($000,000)	3,153	3,075	3,164	2.5	0.1
Crude Oil Production (000 bbl)	8,567	9,199	9,307	-6.9	17.8
Natural Gas Production (000 mcf)[a]	164,448	175,735	138,396	-6.4	-17.8
Industrial Power Sales (000,000 Kwh)[b]	2,887	2,813	726	2.6	0.8
Total Bank Deposits (Monthly Average) ($000,000)[c]					
Demand	7,577	7,529	7,654	0.6	3.0
Savings	23,029	23,648	23,083	-2.6	1.1
Employment					
Total Labor Force (000)[d]	1,515.1	1,499.5	1,522.0	1.0	-0.5
Total Employment (000)	1,428.1	1,403.7	1,445.5	1.7	-0.1
Unemployment Rate (%)	6.0	6.4	5	-6.3	—
Wage & Salary Employment	1,158.8	1,144.7	1,168.6	1.2	0.2
General Business Index					

Note: Includes revisions.

[a] Three months and March data. Natural Gas includes casinghead gas.

[b] Sales of larger privately owned utility companies.

[c] Total deposits of all depository institutions.

[d] Civilian Labor Force. Labor Force employment and unemployment rate refer to place of residence, non-agricultural wage and salary employment refers to place of work.

RETAIL TRADE IN SELECTED CITIES
($000)

City	April '90 Adjusted	April '90 Unadjusted	Percentage Change Adjusted '90/'89 Apr.	Percentage Change Adjusted 1990 Apr./Mar.
Ada	10,967	10,540	7.2	4.7
Altus	8,567	8,544	7.5	-2.8
Alva	3,138	3,102	9.0	2.4
Anadarko	3,554	3,446	4.3	-2.3
Ardmore	15,740	15,720	10.4	-1.4
Bartlesville	22,981	22,589	9.1	2.3
Blackwell	2,538	2,474	2.6	1.9
Broken Arrow	20,838	21,129	8.5	-0.0
Chickasha	8,237	8,086	10.2	-1.0
Clinton	5,296	5,213	6.4	2.9
Cushing	3,966	4,038	5.8	-3.5
Del City	7,359	7,222	0.9	-2.5
Duncan	12,364	12,567	7.4	-4.4
Durant	8,531	8,296	17.9	-3.9
Edmond	23,314	22,015	13.1	0.9
Elk City	6,832	6,636	11.9	-0.8
El Reno	7,131	6,989	6.1	5.3
Guthrie	4,275	4,247	5.2	-5.4
Guymon	4,738	4,803	7.5	11.0
Henryetta	3,183	3,089	8.1	-3.3
Hobart	2,205	2,135	0.6	-6.2
Holdenville	1,825	1,791	2.2	-3.7
Hugo	3,202	3,105	11.2	-5.5
Idabel	4,145	4,193	7.1	-1.8
Lawton	30,738	30,495	-7.4	-2.9

City	April '90 Adjusted	April '90 Unadjusted	Percentage Change Adjusted '90/'89 April	Percentage Change Adjusted 1989 Apr./Mar.
McAlester	9,495	9,482	9.3	-4.3
Miami	7,800	7,714	7.9	-1.3
Midwest City	34,718	34,662	6.6	1.9
Moore	12,805	12,638	5.3	2.1
Muskogee	22,208	22,386	9.0	-3.7
Norman	34,075	32,086	5.9	-2.4
Oklahoma City	219,708	215,774	6.5	-5.8
Okmulgee	4,525	4,513	8.5	-0.2
Pauls Valley	4,564	4,616	11.1	-7.5
Pawhuska	1,694	1,733	3.7	-10.1
Ponca City	15,535	15,515	10.0	-3.4
Poteau	5,734	5,617	14.6	2.1
Sand Springs	8,097	8,348	9.8	-4.1
Sapulpa	8,689	8,524	5.6	-3.0
Seminole	3,984	3,906	7.9	-3.2
Shawnee	20,941	20,358	7.0	-4.3
Stillwater	16,458	16,174	5.6	-1.8
Tahlequah	7,412	7,472	14.1	-5.4
Tulsa	234,319	226,991	11.7	-1.1
Watonga	1,413	1,356	5.4	-0.4
Weatherford	6,270	6,066	6.7	-5.1
Wewoka	1,072	1,074	2.0	-4.2
Woodward	9,991	9,928	10.9	-0.6
Total	917,221	899,398	8.0	-2.4

RETAIL TRADE IN METRO AREAS AND STATE
($000)

	4 Mos. '90	4 Mos. '89	April '90		Percentage Change		
					4 Mos. '90/'89	Apr./March '90	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	679,400	645,149	168,834	166,165	5.3	-1.9	-2.4
Apparel Group	118,175	103,863	30,089	30,596	13.8	2.4	-2.9
General Merchandise Group	367,450	386,291	92,841	85,694	-4.9	-0.9	-7.7
Furniture Group	117,710	100,387	29,016	27,232	17.3	-14.7	-10.3
Lumber Group	69,305	63,238	16,191	17,626	9.6	3.2	19.2
Gasoline	145,903	135,530	34,697	36,938	7.7	-8.1	-1.6
All Other	202,129	142,566	42,903	47,628	41.8	-16.0	6.5
Total	1,700,072	1,577,024	414,571	411,879	7.8	-4.4	-2.4
TULSA MSA							
Food Group	510,722	469,929	124,301	123,760	8.7	-6.2	-7.4
Apparel Group	80,438	71,079	20,909	20,299	13.2	7.4	3.3
General Merchandise Group	331,250	282,614	80,710	75,026	17.2	0.9	-6.7
Furniture Group	81,944	67,540	20,495	20,034	21.3	-1.4	4.6
Lumber Group	64,769	59,305	15,972	17,312	9.2	1.6	18.7
Gasoline	89,933	83,605	21,246	22,634	7.6	-8.4	-1.6
All Other	77,954	74,191	22,908	25,401	5.1	12.5	27.1
Total	1,237,010	1,108,263	306,541	304,466	11.6	-1.8	-1.9
ENID MSA							
Food Group	36,390	35,060	9,176	8,923	3.8	-3.5	-5.7
Apparel Group	6,826	6,330	1,752	1,860	7.8	-1.2	5.1
General Merchandise Group	32,998	27,273	8,531	8,188	21.0	-0.2	0.7
Furniture Group	4,604	4,623	1,088	1,047	-0.4	-11.5	-14.3
Lumber Group	4,602	3,973	1,111	1,159	15.8	0.4	16.1
Gasoline	8,410	7,816	1,988	2,118	7.6	-8.3	-1.6
All Other	6,639	7,915	1,011	1,556	-16.1	-26.0	-5.1
Total	100,469	92,990	24,657	24,851	8.0	-4.1	-2.0
LAWTON MSA							
Food Group	43,406	51,692	10,432	10,238	-16.0	-7.5	-12.6
Apparel Group	9,427	8,096	2,447	2,671	16.4	3.8	13.4
General Merchandise Group	47,851	48,339	11,623	11,131	-1.0	-1.6	-0.9
Furniture Group	8,851	8,519	2,207	2,182	3.9	3.1	6.5
Lumber Group	7,255	7,275	1,844	2,088	-0.3	4.4	15.5
Gasoline	12,640	11,712	2,994	3,236	7.9	-7.7	-1.6
All Other	5,233	8,425	1,375	987	-37.9	-9.7	-33.8
Total	134,663	144,058	32,922	32,533	-6.5	-3.5	-4.1
MUSKOGEE AREA							
Food Group	40,317	38,994	9,617	9,791	3.4	-10.1	-7.7
Apparel Group	9,353	8,319	2,688	2,909	12.4	18.8	24.2
General Merchandise Group	26,023	21,844	6,325	6,323	19.1	-0.9	3.1
Furniture Group	4,503	4,149	1,066	1,100	8.5	-9.7	0.3
Lumber Group	4,658	3,861	1,136	1,261	20.6	2.0	11.0
Gasoline	9,325	8,656	2,216	2,359	7.7	-8.1	-1.6
All Other	7,312	7,532	1,511	1,426	-2.9	-6.6	-9.5
Total	101,491	93,355	24,559	25,169	8.7	-4.3	-0.5
STATE[a]							
Durable Goods	628,901	592,120	155,506	154,343	6.2	9.2	6.8
Accessory Dealers	128,472	125,714	30,373	31,441	2.2	-3.4	0.4
Furniture	171,869	139,279	49,695	45,763	23.4	26.7	16.3
Household Appliances	87,984	88,615	22,770	21,144	-0.7	3.9	1.6
Total Furniture and Appliances	259,853	227,894	72,465	66,907	14.0	18.5	11.2
Lumber and Building Materials	196,607	183,193	43,253	45,560	7.3	-7.8	6.1
Hardware Stores	23,273	22,772	5,241	6,121	2.2	-13.4	3.0
Total Lumber, Building Materials & Hardware	219,880	205,965	48,494	51,681	6.8	-8.4	5.7
Nondurable Goods	3,909,694	3,765,983	959,139	951,941	3.8	-4.1	-2.6
Apparel	286,225	271,236	70,968	68,676	5.5	1.1	-9.3
Drug Stores	155,145	146,601	38,954	37,335	5.8	7.3	3.5
Eating and Drinking Places	604,079	558,875	148,723	153,271	8.1	-4.3	-2.3
Food Group	1,264,297	1,223,788	312,515	303,800	3.3	-4.0	-4.2
Gasoline	428,694	398,529	102,248	108,265	7.6	-8.2	-1.6
General Merchandise Group	914,000	896,560	220,151	208,900	1.9	-5.3	-1.4
Total Retail Trade	4,538,595	4,358,103	1,114,645	1,106,284	4.1	-2.5	-1.4

[a] Total includes data for categories not shown in the table.

ENID AND LAWTON MSAs
MUSKOGEE MA

Category	4 Mos. '90	4 Mos. '89	April '90	Percentage Change 4 Mos. '90/'89	Percentage Change Apr./March '90
ENID MSA					
Employment (Number)					
Labor Force[a]	27,244	27,613	27,575	-1.3	0.2
Total Employment	25,950	26,113	26,475	-0.6	0.7
Unemployment Rate (%)	4.8	5.5	4.0	—	—
Wage and Salary Employment	21,500	21,400	21,600	0.5	0.0
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	1,139	173	170	558.4	-85.1
Number of Units	11	2	2	450.0	-81.8
Residential—Multi Family					
Dollar Value ($000)	0	300	0	—	0.0
Number of Units	0	6	0	—	0.0
Nonresidential					
Commercial ($000)	272	900	198	-69.8	-27.3
Industrial ($000)	50	0	50	—	0.0
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	1,626	4,201	44	-61.3	-97.3
All Other Nonbuilding ($000)	17	57	17	-70.3	0.0
Total Construction ($000)	3,104	5,631	873	-44.9	-71.9
LAWTON MSA					
Employment (Number)					
Labor Force[a]	47,831	47,700	48,225	0.3	-0.9
Total Employment	45,119	44,725	45,500	0.9	-0.8
Unemployment Rate (%)	5.7	5.3	5.7	—	—
Wage and Salary Employment	34,800	33,700	34,800	3.3	-0.6
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	2,995	2,724	392	9.9	-65.6
Number of Units	30	25	5	20.0	-54.5
Residential—Multi Family					
Dollar Value ($000)	0	0	0	0.0	0.0
Number of Units	0	0	0	0.0	0.0
Nonresidential					
Commercial ($000)	4,105	1,114	266	268.5	-2.2
Industrial ($000)	2,470	0	0	—	—
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	197	386	0	-48.9	—
All Other Nonbuilding ($000)	0	0	0	0.0	—
Total Construction ($000)	9,767	4,224	658	131.2	-78.8
MUSKOGEE MA					
Employment (Number)					
Labor Force[a]	30,369	30,519	30,225	-0.5	-1.1
Total Employment	28,194	27,950	28,300	0.9	-0.6
Unemployment Rate (%)	7.2	8.4	6.4	—	—

Note: Includes revisions.

[a] Civilian Labor Force.

E = Exceeds 600 percent.

Sources for all tables: Local utilities companies; 10th Federal Reserve District Member Banks; Federal Home Loan Bank of Topeka; U.S. Department of Labor, Bureau of Labor Statistics; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, *Progressive Report of the Transportation Director;* Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by John McCraw, Statistician for CEMR and Brian M. Hickey, Data Analyst.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. July 1990.

The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73069. July 1990, volume 58, number 7, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma 73070. Subscription price per year is $10.00 Postmaster: Send address changes to the ***Oklahoma Business Bulletin***, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

Due to a change in reporting procedures, Motor Vehicle excise tax collections are no longer available from the Oklahoma Tax Commission as of May 1990. Consequently, the total retail trade estimates reported in this bulletin do not contain Motor Vehicle sales estimates. Motor Vehicle sales estimates have also been removed from historical retail trade data for purposes of comparison.

Center for Economic and Management Research
University of Oklahoma
Norman, Oklahoma 73019-0450

OKLAHOMA CITY AND TULSA MSAs

Category	4 Mos. '90	4 Mos. '89	April '90	Percentage Change 4 Mos. '90/'89	Percentage Change April/March '90
OKLAHOMA CITY MSA					
Employment (Number)					
Labor Force[a]	500,200	493,400	502,400	1.4	-0.5
Total Employment	473,900	468,000	481,600	1.3	-0.3
Unemployment Rate (%)	5.3	5.2	4.1	—	—
Wage and Salary Employment	426,900	420,000	432,400	1.6	0.3
Bank Deposits ($000,000)[b]					
Demand Deposits	832	824	789	1.0	0.9
Time and Savings Deposits	1,157	1,174	1,152	-1.4	-0.5
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	64,356	53,815	22,542	19.6	128.0
Number of Units	760	608	253	25.0	90.2
Residential—Multi Family					
Dollar Value ($000)	670	6,068	0	-89.0	—
Number of Units	32	183	0	-82.5	—
Nonresidential					
Commercial ($000)	9,545	14,627	1,289	-34.7	-45.5
Industrial ($000)	1,317	2,372	120	-44.5	-70.0
Institutional ($000)	1,686	2,806	820	-39.9	—
Nonbuilding					
Streets and Highways ($000)	40,370	7,112	23,695	467.6	68.7
All Other Nonbuilding ($000)	693	764	255	-9.3	16.1
Total Construction ($000)	118,636	87,564	48,721	35.5	76.6
TULSA MSA					
Employment (Number)					
Labor Force[a]	340,000	333,600	343,200	1.9	-0.2
Total Employment	319,900	311,300	325,200	2.8	0.2
Unemployment Rate (%)	5.9	6.8	5.2	—	—
Wage and Salary Employment	310,600	299,200	312,900	3.8	0.2
Bank Deposits ($000,000)[b]					
Demand Deposits	1,052	939	1,075	12.0	3.6
Time and Savings Deposits	2,076	2,092	2,031	-0.8	-0.4
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	51,283	47,021	15,048	9.1	4.5
Number of Units	640	587	181	9.0	-1.1
Residential—Multi Family					
Dollar Value ($000)	76	82	0	-7.7	0.0
Number of Units	2	4	0	-50.0	0.0
Nonresidential					
Commercial ($000)	28,250	10,699	1,440	164.1	-87.0
Industrial ($000)	50,413	9,374	1,039	437.8	-79.5
Institutional ($000)	4,297	8,110	30	-47.0	-99.1
Nonbuilding					
Streets and Highways ($000)	2,196	11,203	110	-80.4	-82.2
All Other Nonbuilding ($000)	1,234	968	369	27.5	24.4
Total Construction ($000)	137,749	87,458	18,036	57.5	-48.1

Note: Includes revisions.

[a] Civilian Labor Force.

[b] Total deposits of large commercial banks (accounted for 33 percent of all commercial bank deposits as of December 31, 1989 for Oklahoma City and 57 percent of all commercial bank deposits as of December 31, 1989 for Tulsa).

CONSTRUCTION, STATE

Category	4 Mos. '90	4 Mos. '89	April '90	Percentage Change 4 Mos.'90/'89	Percentage Change April/March '90
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	129,129	115,091	40,774	12.2	40.5
Number of Units	1,538	1,366	469	12.6	31.0
Residential—Multi Family					
Dollar Value ($000)	971	6,450	72	-85.0	-89.3
Number of Units	47	193	4	-75.6	-87.5
Nonresidential					
Commercial ($000)	47,905	36,702	4,168	30.5	-76.1
Industrial ($000)	54,789	12,070	1,209	353.9	-78.7
Institutional ($000)	6,755	12,422	1,257	-45.6	-62.3
Nonbuilding					
Streets and Highways ($000)	74,434	79,273	33,491	-6.1	20.5
All Other Nonbuilding ($000)	2,013	1,902	656	5.8	22.4
Total Construction ($000)	315,996	263,911	81,627	19.7	-3.4

Note: Includes revisions.

J U8130-1

OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF OKLAHOMA

CONGRESSIONAL INFO. SERVICE/SRI
ATTN: ROBERTA B. MASON
4520 EAST-WEST HIGHWAY
BETHESDA MD 20814

ISSN 0030-1671

August 1990

VOL. 58, ISSUE 8

SUMMARY OF INDICATORS

Category	5 Mos. '90	5 Mos. '89	May '90	Percentage Change 5 Mos. '90/'89	Percentage Change May/April '90
Personal Income					
Unadjusted ($000,000)	4,584	4,323	4,623	6.0	0.3
Adjusted for CPI ($000,000)	3,569	3,532	3,578	1.0	0.3
Crude Oil Production (000 bbl)	34,256	36,786	8,061	-6.9	-8.0
Natural Gas Production (000 mcf)[a]	676,414	699,835	135,889	-3.3	-23.2
Industrial Power Sales (000,000 Kwh)[b]	3,628	3,540	740	2.5	1.9
Total Bank Deposits (Monthly Average) ($000,000)[c]					
Demand	NA	7,495	NA	—	—
Savings	NA	23,601	NA	—	—
Employment					
Total Labor Force (000)[d]	1,521.8	1,502.1	1,548.6	1.3	1.7
Total Employment (000)	1,435.3	1,407.5	1,464.1	2.0	1.3
Unemployment Rate (%)	5.9	6.3	5.5	—	—
Wage & Salary Employment	1,161.7	1,147.7	1,173.2	1.2	0.4
General Business Index	98.1	95.4	98.0	2.8	-0.7

Note: Includes revisions.

[a] Four months and April data. Natural Gas includes casinghead gas.

[b] Sales of larger privately owned utility companies.

[c] Total deposits of all depository institutions.

[d] Civilian Labor Force. Labor Force employment and unemployment rate refer to place of residence, non-agricultural wage and salary employment refers to place of work.

RETAIL TRADE IN SELECTED CITIES
($000)

City	May '90 Adjusted	May '90 Unadjusted	Percentage Change Adjusted '90/'89 May	Percentage Change Adjusted 1990 May/April	City	May '90 Adjusted	May '90 Unadjusted	Percentage Change Adjusted '90/'89 May	Percentage Change Adjusted 1990 May/April
Ada	10,943	11,081	6.7	-0.2	McAlester	9,872	10,477	8.3	4.1
Altus	8,409	8,820	5.6	-1.6	Miami	7,816	7,836	6.4	0.4
Alva	2,985	3,047	8.2	-5.9	Midwest City	33,436	35,139	6.1	-3.1
Anadarko	3,516	3,695	4.1	-0.7	Moore	13,359	13,795	4.0	3.9
Ardmore	15,817	16,375	10.2	0.6	Muskogee	21,780	22,028	7.5	-1.3
Bartlesville	21,663	21,797	8.1	-5.3	Norman	34,242	33,642	6.1	0.6
Blackwell	2,535	2,552	3.1	-0.2	Oklahoma City	222,397	224,710	6.4	1.3
Broken Arrow	19,968	21,173	6.9	-3.9	Okmulgee	3,865	4,056	5.2	-14.4
Chickasha	8,212	8,586	9.9	0.0	Pauls Valley	4,758	4,937	11.0	3.8
Clinton	5,244	5,288	7.1	-1.0	Pawhuska	1,725	1,830	2.8	2.1
Cushing	4,057	4,418	5.8	2.5	Ponca City	15,644	15,907	8.2	1.0
Del City	6,357	6,679	-2.0	-12.6	Poteau	5,415	5,634	14.4	-5.0
Duncan	12,557	13,799	7.6	1.6	Sand Springs	7,647	8,044	6.4	-4.9
Durant	8,349	8,328	16.5	-1.7	Sapulpa	7,404	7,767	2.2	-14.3
Edmond	24,136	24,789	14.3	3.0	Seminole	3,919	4,109	6.4	-1.0
Elk City	6,528	6,551	9.9	-3.7	Shawnee	21,012	22,362	6.1	0.7
El Reno	7,392	7,776	7.7	3.2	Stillwater	16,708	16,199	5.9	1.8
Guthrie	4,371	4,714	-2.0	2.2	Tahlequah	7,444	7,846	13.0	0.8
Guymon	4,835	5,394	10.0	0.4	Tulsa	232,795	230,775	10.6	-0.5
Henryetta	3,239	3,506	7.6	2.1	Watonga	1,402	1,451	5.7	-0.6
Hobart	2,275	2,312	0.3	3.1	Weatherford	6,211	6,293	3.5	-0.7
Holdenville	1,831	1,905	2.0	0.2	Wewoka	1,025	1,107	0.5	-3.9
Hugo	3,209	3,379	10.3	-0.0	Woodward	9,653	9,966	9.7	-3.1
Idabel	4,253	4,433	7.0	2.2					
Lawton	31,206	32,480	-7.3	1.5	**Total**	913,418	928,789	7.3	-0.3

RETAIL TRADE IN METRO AREAS AND STATE
($000)

					Percentage Change		
	5 Mos. '90	5 Mos. '89	May '90		5 Mos. '90/'89	May/April '90	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	845,689	807,389	167,170	173,350	4.7	-0.6	4.3
Apparel Group	146,163	132,589	28,476	25,694	10.2	-4.5	-16.0
General Merchandise Group	465,758	489,072	96,881	93,949	-4.8	3.0	9.6
Furniture Group	144,182	124,268	26,981	25,499	16.0	-5.7	-6.4
Lumber Group	86,189	78,285	16,633	19,661	10.1	2.6	11.5
Gasoline	181,926	170,968	35,968	38,057	6.4	3.6	3.0
All Other	249,091	171,952	48,609	53,552	44.9	14.6	12.4
Total	2,118,998	1,974,523	420,718	429,762	7.3	1.6	4.3
TULSA MSA							
Food Group	630,639	591,918	121,497	125,142	6.5	-1.8	1.1
Apparel Group	100,849	91,103	20,471	18,143	10.7	-2.0	-10.6
General Merchandise Group	413,336	355,343	82,319	80,441	16.3	2.1	7.2
Furniture Group	100,220	84,698	18,850	17,790	18.3	-6.9	-11.2
Lumber Group	80,213	73,771	15,519	16,966	8.7	-2.8	-2.0
Gasoline	112,105	105,399	22,050	23,320	6.4	3.3	3.0
All Other	103,162	98,306	22,829	26,224	4.9	-1.0	3.2
Total	1,540,524	1,400,538	303,535	308,026	10.0	-0.7	1.2
ENID MSA							
Food Group	46,509	44,080	10,057	9,637	5.5	9.2	8.0
Apparel Group	8,321	8,003	1,577	1,557	4.0	-7.7	-16.3
General Merchandise Group	41,322	34,381	8,394	8,364	20.2	-1.4	2.1
Furniture Group	5,730	5,654	1,137	1,166	1.3	4.9	11.4
Lumber Group	5,659	4,787	1,096	1,216	18.2	0.0	4.9
Gasoline	10,481	9,854	2,063	2,182	6.4	3.4	3.0
All Other	8,372	9,811	1,508	2,207	-14.7	38.6	41.8
Total	126,394	116,570	25,832	26,329	8.4	4.6	5.9
LAWTON MSA							
Food Group	54,235	64,314	10,844	11,388	-15.7	4.1	11.2
Apparel Group	11,813	10,057	2,397	2,227	17.5	-1.8	-16.6
General Merchandise Group	59,827	60,226	11,996	11,945	-0.7	3.3	7.3
Furniture Group	11,049	10,745	2,166	2,169	2.8	-2.7	-0.6
Lumber Group	9,121	9,132	1,849	2,194	-0.1	-0.1	5.1
Gasoline	15,756	14,759	3,123	3,334	6.8	4.2	3.0
All Other	6,324	10,580	1,222	1,514	-40.2	-5.3	53.4
Total	168,125	179,813	32,597	34,771	-6.5	-0.7	6.9
MUSKOGEE AREA							
Food Group	50,311	47,848	10,103	10,044	5.1	5.4	2.6
Apparel Group	11,655	10,050	2,250	2,204	16.0	-18.8	-24.2
General Merchandise Group	32,122	25,573	6,206	5,964	25.6	-1.1	-5.7
Furniture Group	5,700	5,039	1,179	1,095	13.1	9.9	-0.5
Lumber Group	5,784	4,631	1,134	1,214	24.9	-0.6	-3.7
Gasoline	11,620	10,918	2,304	2,431	6.4	3.6	3.1
All Other	8,873	8,854	1,581	1,992	0.2	11.2	39.7
Total	126,065	112,913	24,757	24,944	11.6	1.1	-0.9
STATE[a]							
Durable Goods	776,932	741,476	148,974	157,932	4.8	-4.0	2.3
Accessory Dealers	159,627	458,498	31,100	34,577	0.7	2.2	10.0
Furniture	210,870	174,225	39,344	37,023	21.0	-22.6	-19.1
Household Appliances	110,536	111,065	22,439	21,868	-0.5	-1.8	3.4
Total Furniture and Appliances	321,406	285,290	61,783	58,891	12.7	-16.2	-12.0
Lumber and Building Materials	242,219	228,805	45,466	52,561	5.9	4.5	15.3
Hardware Stores	28,681	28,684	5,473	6,293	-0.0	4.6	2.8
Total Lumber, Building Materials & Hardware	270,900	257,489	50,939	58,854	5.2	4.5	13.8
Nondurable Goods	4,871,109	4,666,455	965,780	1,011,518	4.4	0.9	6.3
Apparel	358,311	341,538	72,022	68,031	4.9	1.3	-0.9
Drug Stores	192,102	183,293	37,277	37,273	4.8	-3.2	-0.2
Eating and Drinking Places	748,022	698,630	144,985	157,257	7.1	-2.1	2.6
Food Group	1,568,965	1,528,025	307,126	320,676	2.7	-1.2	5.6
Gasoline	534,539	502,583	105,808	111,545	6.4	3.5	3.0
General Merchandise Group	1,152,373	1,115,607	237,558	239,656	3.3	7.5	14.7
Total Retail Trade	5,648,041	5,407,931	1,114,754	1,169,450	4.4	0.2	5.7

[a] Total includes data for categories not shown in the table.

ENID AND LAWTON MSAs
MUSKOGEE MA

				Percentage Change	
Category	5 Mos. '90	5 Mos. '89	May '90	5 Mos. '90/'89	May/April '90
ENID MSA					
Employment (Number)					
Labor Force[a]	27,375	27,590	27,900	-0.8	1.2
Total Employment	26,105	26,130	26,725	-0.1	0.9
Unemployment Rate (%)	4.7	5.3	4.2	—	—
Wage and Salary Employment	21,400	21,400	21,400	0.0	-0.9
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	1,139	398	0	558.4	-85.1
Number of Units	11	4	0	450.0	-81.8
Residential—Multi Family					
Dollar Value ($000)	0	300	0	—	0.0
Number of Units	0	6	0	—	0.0
Nonresidential					
Commercial ($000)	297	914	25	-69.8	-27.3
Industrial ($000)	50	0	0	—	0.0
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	1,626	4,201	0	-61.3	-97.3
All Other Nonbuilding ($000)	34	75	17	-70.3	0.0
Total Construction ($000)	3,146	5,887	42	-44.9	-71.9
LAWTON MSA					
Employment (Number)					
Labor Force[a]	48,125	47,370	49,300	1.6	2.2
Total Employment	45,390	44,875	46,475	1.1	2.1
Unemployment Rate (%)	5.7	5.3	5.7	—	—
Wage and Salary Employment	34,800	33,900	35,000	2.7	0.6
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	3,327	3,005	332	9.9	-65.6
Number of Units	34	29	4	20.0	-54.5
Residential—Multi Family					
Dollar Value ($000)	0	0	0	0.0	0.0
Number of Units	0	0	0	0.0	0.0
Nonresidential					
Commercial ($000)	4,105	1,201	0	268.5	-2.2
Industrial ($000)	2,470	0	0	—	—
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	197	567	0	-48.9	—
All Other Nonbuilding ($000)	0	0	0	0.0	—
Total Construction ($000)	10,099	4,773	332	131.2	-78.8
MUSKOGEE MA					
Employment (Number)					
Labor Force[a]	30,420	30,595	30,625	-0.6	1.3
Total Employment	28,270	28,080	28,575	0.7	1.0
Unemployment Rate (%)	7.1	8.2	6.7	—	—

Note: Includes revisions.

[a] Civilian Labor Force.

Sources for all tables: Local utilities companies; 10th Federal Reserve District Member Banks; Federal Home Loan Bank of Topeka; U.S. Department of Labor, Bureau of Labor Statistics; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, *Progressive Report of the Transportation Director;* Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by John McCraw, Statistician for CEMR and Brian M. Hickey, Data Analyst.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. August 1990.

The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73069. August 1990, volume 58, number 8, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma 73070. Subscription price per year is $10.00 Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

Center for Economic and Management Research
University of Oklahoma
Norman, Oklahoma 73019-0450

OKLAHOMA CITY AND TULSA MSAs

Category	5 Mos. '90	5 Mos. '89	May '90	Percentage Change 5 Mos. '90/'89	Percentage Change May/April '90
OKLAHOMA CITY MSA					
Employment (Number)					
Labor Force[a]	502,400	493,300	511,500	1.6	1.8
Total Employment	476,300	469,100	486,000	1.5	0.9
Unemployment Rate (%)	5.2	5.1	5.0	—	—
Wage and Salary Employment	428,200	420,500	433,100	1.8	0.2
Bank Deposits ($000,000)[b]					
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	90,338	68,730	25,562	19.6	128.0
Number of Units	1,045	785	278	25.0	90.2
Residential—Multi Family					
Dollar Value ($000)	670	20,120	0	-89.0	—
Number of Units	32	417	0	-82.5	—
Nonresidential					
Commercial ($000)	16,704	18,334	7,063	-34.7	-45.5
Industrial ($000)	1,411	2,454	36	-44.5	-70.0
Institutional ($000)	1,869	5,281	183	-39.9	—
Nonbuilding					
Streets and Highways ($000)	45,372	10,740	5,002	467.6	68.7
All Other Nonbuilding ($000)	1,097	1,031	404	-9.3	16.1
Total Construction ($000)	157,461	126,690	38,250	35.5	76.6
TULSA MSA					
Employment (Number)					
Labor Force[a]	342,100	333,900	350,600	2.5	2.2
Total Employment	322,200	311,500	331,200	3.4	1.8
Unemployment Rate (%)	5.8	6.7	5.5	—	—
Wage and Salary Employment	311,700	300,200	316,200	3.8	1.1
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	68,837	61,993	12,554	9.1	4.5
Number of Units	795	777	155	9.0	-1.1
Residential—Multi Family					
Dollar Value ($000)	76	82	0	-7.7	0.0
Number of Units	2	4	0	-50.0	0.0
Nonresidential					
Commercial ($000)	32,532	13,929	4,282	164.1	-87.0
Industrial ($000)	56,258	10,915	5,845	437.8	-79.5
Institutional ($000)	4,385	10,156	88	-47.0	-99.1
Nonbuilding					
Streets and Highways ($000)	2,605	11,343	670	-80.4	-82.2
All Other Nonbuilding ($000)	1,382	1,348	148	27.5	24.4
Total Construction ($000)	161,075	109,766	23,587	57.5	-48.1

Note: Includes revisions.

[a] Civilian Labor Force.

[b] Total deposits of large commercial banks (accounted for 33 percent of all commercial bank deposits as of December 31, 1989 for Oklahoma City and 57 percent of all commercial bank deposits as of December 31, 1989 for Tulsa).

CONSTRUCTION, STATE

Category	5 Mos. '90	5 Mos. '89	May '90	Percentage Change 5 Mos.'90/'89	Percentage Change May/April '90
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	169,012	147,212	39,783	12.2	40.5
Number of Units	1,997	1,760	457	12.6	31.0
Residential—Multi Family					
Dollar Value ($000)	1,051	20,502	80	-85.0	-89.3
Number of Units	49	427	2	-75.6	-87.5
Nonresidential					
Commercial ($000)	60,332	44,350	12,426	30.5	-76.1
Industrial ($000)	60,835	13,768	5,988	353.9	-78.7
Institutional ($000)	7,119	18,931	364	-45.6	-62.3
Nonbuilding					
Streets and Highways ($000)	97,976	110,729	23,542	-6.1	20.5
All Other Nonbuilding ($000)	2,623	2,621	594	5.8	22.4
Total Construction ($000)	398,947	358,114	82,776	19.7	-3.4

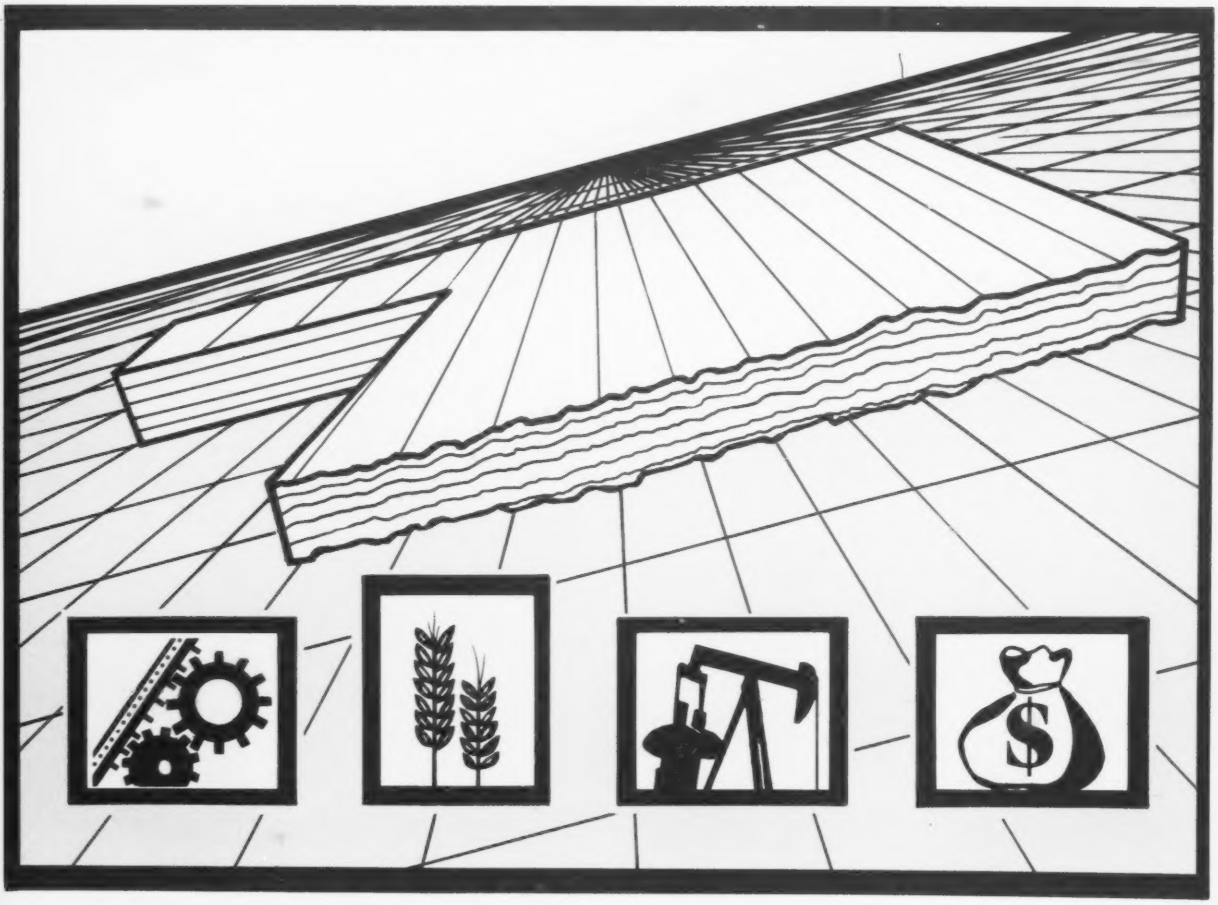
Note: Includes revisions.

U8130-1 A

OKLAHOMA BUSINESS BULLETIN

CENTER FOR ECONOMIC AND MANAGEMENT RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF OKLAHOMA

September 1980 VOL. 48, ISSUE 9



The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73019-0450. September 1990, volume 58, number 9, ISSN 0030-1671. Second class postage paid at Norman, Oklahoma. Subscription price per year is $10.00. Postmaster: Send address changes to the *Oklahoma Business Bulletin,* 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

The Editorial Review Board welcomes original manuscripts, studies, and research reports from persons in both the public and private sector in any area of economics and business administration. The editorial policy of the *Bulletin* promotes a free exchange of ideas and analyses. Accordingly, the contents do not necessarily reflect the views of the editor or the publisher.

Manuscripts for consideration should be typed, double-spaced, and submitted in duplicate. Each submitted manuscript is reviewed by at least two members of the Editorial Review Board and a decision is usually reached in four to six weeks.

Address all manuscripts and correspondence to:

Oklahoma Business Bulletin
Center for Economic and Management Research
307 West Brooks, Room 4
Norman, Oklahoma 73019-0450

The *Oklahoma Business Bulletin* is published by the Center for Economic and Management Research, College of Business Administration, The University of Oklahoma.

©1990 by the Center for Economic and Management Research. Printed in the United States of America.

CEM RESEARCH
Center for Economic and Management Research

PUBLICATIONS STAFF

Director	ROBERT C. DAUFFENBACH
Assistant Director	DAVID PENN
Information Specialist	JOHN MCCRAW
Data Analyst	BRIAN HICKEY
Publications Assistant	PATRICIA WICKHAM
Graphics	SUSAN CLANCY
Copyreader	MARILYN CAIN

EDITORIAL REVIEW BOARD

CLYDE C. COLE President, Tulsa Chamber of Commerce, Tulsa, Oklahoma.

JAMES A. CONSTANTIN David Ross Boyd Professor Emeritus, College of Business Administration, University of Oklahoma, Norman, Oklahoma.

JAMES E. HIBDON Professor of Economics, University of Oklahoma, Norman, Oklahoma.

H.E. RAINBOLT Chairman of the Board, Federal National Bank & Trust Company, Shawnee, Oklahoma.

ROBERT L. SANDMEYER Dean, College of Business Administration, Oklahoma State University, Stillwater, Oklahoma.

WILLIS J. WHEAT T.K. Hendrick Professor of Marketing/Management, School of Management and Business Sciences, Oklahoma City University.

DANIEL A. WREN Professor of Management, University of Oklahoma, Norman, Oklahoma.

Table of Contents

TABLES

Summary of Indicators 2

Selected Economic Indicators 2

Retail Trade in Metro Areas and State 3

Retail Trade in Selected Cities 4

Metropolitan Area Data

Enid and Lawton 5

Muskogee 5

Tulsa 6

Oklahoma City 7

ARTICLES

Business Highlights 8
David Penn

An Analysis of Oklahoma's Economy 10
Craig Knutson

Employment-At-Will in Oklahoma 19
M. Ronald Buckley
Candice Cox
Bernard Patrick Maroney
Peter C. Johnson

Ranking Oklahoma's Taxes 29
Joseph T. Johnson

SUMMARY OF INDICATORS

Category	6 Mos. '90	6 Mos. '89	June '90	Percentage Change 6 Mos. '90/'89	Percentage Change June/May '90
Personal Income (Monthly Average)					
Unadjusted ($000,000)	4,593	4,333	4,640	6.0	0.4
Adjusted for CPI ($000,000)	3,569	3,532	3,572	1.0	-0.2
Crude Oil Production (000 bbl)[a]	42,345	46,159	7,845	-8.3	-5.4
Natural Gas Production (000 mcf)[a]	867,580	889,537	146,794	-2.5	-16.1
Industrial Power Sales (000,000 Kwh)[b]	4,418	4,296	791	2.8	6.9
Total Bank Deposits (Monthly Average) ($000,000)					
Demand	7,548	7,457	7,487	1.2	0.4
Savings	23,228	23,568	23,409	-1.4	-0.1
General Business Index	98.2	95.5	98.9	2.8	0.9

Note: Includes revisions.

[a] Five months and May data. Natural gas includes casinghead gas.

[b] Sales of larger privately owned utility companies.

SELECTED ECONOMIC INDICATORS

Category	6 Mos. '90	6 Mos. '89	June '90	Percentage Change 6 Mos. '90/'89	Percentage Change June/May '90
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	202,172	178,828	36,754	15.8	-10.6
Number of Units	2,435	2,139	428	13.8	-8.0
Residential—Multi Family					
Dollar Value ($000)	10,022	21,498	8,971	-53.4	E
Number of Units	349	492	300	-29.1	E
Nonresidential					
Commercial ($000)	69,824	50,269	9,424	38.9	-24.2
Industrial ($000)	61,170	14,207	336	330.6	-94.4
Institutional ($000)	8,686	21,758	1,567	-60.1	330.4
Nonbuilding					
Streets and Highways ($000)	130,925	155,164	32,949	-15.6	40.0
All Other Nonbuilding ($000)	3,531	3,273	903	7.9	51.1
Total Construction ($000)	491,330	444,997	90,903	10.4	8.1
EMPLOYMENT TRENDS					
Total Labor Force (000)[a]	1,531.0	1,509.7	1,577.0	1.4	1.8
Total Employment (000)	1,446.2	1,416.4	1,500.8	2.1	2.5
Unemployment Rate (%)	5.7	6.2	4.8	—	—
Wage and Salary Employment (000)	1,163.5	1,149.7	1,172.3	1.2	-0.1
Manufacturing (000)	163,500	162,200	165,100	0.8	0.6
Mining (000)	44,400	42,700	45,500	4.0	2.0
Government (000)	258,200	258,600	253,800	-0.2	-3.8
Contract Construction (000)	35,300	34,100	36,900	3.5	3.9
Services (000)	261,700	254,900	265,400	2.7	0.8
Retail Trade (000)	216,700	212,700	220,300	1.9	0.7
Average Weekly Hours (Per Worker)					
Manufacturing	40.9	41.2	40.3	-0.7	0.2
Average Weekly Earnings ($ Per Worker)					
Manufacturing	436.50	430.42	437.66	1.4	4.1
Contract Construction	444.77	416.66	454.54	6.7	2.9
Retail Trade	191.76	194.21	196.80	-1.3	2.7

Note: Includes revisions in some previous months.

[a] Civilian Labor Force. Labor Force employment and unemployment rate refer to place of residence, non-agricultural wage and salary employment refers to place of work.

E = Exceeds 600 percent.

RETAIL TRADE IN METRO AREAS AND STATE
($000)

					Percentage Change		
	6 Mos. '90	6 Mos. '89	June '90		6 Mos. '90/'89	June/May '90	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
OKLAHOMA CITY MSA							
Food Group	1,012,919	956,073	188,123	195,755	5.9	13.5	14.5
Apparel Group	180,016	163,721	31,975	28,967	10.0	13.7	14.0
General Merchandise Group	567,382	598,529	94,158	95,061	-5.2	-1.6	2.3
Furniture Group	168,204	144,655	28,210	28,013	16.3	8.2	14.2
Lumber Group	104,202	93,893	16,903	20,365	11.0	2.1	5.3
Gasoline	231,832	224,138	38,599	41,912	3.4	2.6	7.3
All Other	290,007	192,039	46,944	51,830	51.0	-8.0	-3.5
Total	2,554,562	2,373,048	444,912	461,903	7.6	5.7	8.4
TULSA MSA							
Food Group	767,751	711,226	145,279	154,287	7.9	23.4	25.3
Apparel Group	124,342	113,146	21,776	20,311	9.9	6.6	12.6
General Merchandise Group	487,363	432,792	81,238	80,814	12.6	0.0	2.5
Furniture Group	122,543	105,902	19,745	19,659	15.7	3.3	11.3
Lumber Group	96,419	89,088	16,266	19,193	8.2	6.5	16.1
Gasoline	142,055	137,339	23,651	25,681	3.4	2.6	7.3
All Other	134,334	129,238	22,611	23,888	3.9	2.1	-8.1
Total	1,874,807	1,718,731	330,566	343,833	9.1	10.6	13.0
ENID MSA							
Food Group	55,170	52,955	9,175	9,647	4.2	-7.4	0.3
Apparel Group	9,979	9,753	1,615	1,489	2.3	2.2	-4.1
General Merchandise Group	50,436	42,815	8,466	7,996	17.8	0.4	-3.8
Furniture Group	6,972	6,827	1,129	1,134	2.1	-2.3	-2.7
Lumber Group	6,562	5,726	981	1,074	14.6	-7.8	-11.0
Gasoline	13,295	12,853	2,213	2,403	3.4	2.5	7.2
All Other	10,227	11,410	2,036	2,597	-10.4	16.8	18.7
Total	152,641	142,339	25,615	26,340	7.2	-1.6	0.2
LAWTON MSA							
Food Group	81,287	76,155	15,978	16,288	6.7	20.2	18.3
Apparel Group	14,128	12,239	2,299	2,230	15.4	-4.2	-0.1
General Merchandise Group	70,610	71,607	12,063	11,767	-1.4	0.9	-1.5
Furniture Group	13,770	13,241	2,525	2,509	4.0	14.6	15.7
Lumber Group	10,991	11,285	1,690	1,916	-2.6	-8.4	-12.8
Gasoline	20,324	19,650	3,383	3,674	3.4	2.6	7.3
All Other	12,971	13,513	2,139	2,393	-4.0	12.3	6.9
Total	224,081	217,690	40,077	40,777	2.9	8.6	7.4
MUSKOGEE AREA							
Food Group	61,053	58,110	11,377	11,889	5.1	15.8	17.9
Apparel Group	14,040	12,822	2,282	2,129	9.5	1.5	-3.4
General Merchandise Group	39,317	34,638	6,720	6,426	13.5	7.8	7.7
Furniture Group	7,163	6,264	1,318	1,404	14.4	14.6	27.9
Lumber Group	7,054	6,288	1,263	1,511	12.2	9.9	24.0
Gasoline	14,820	14,328	2,467	2,679	3.4	2.6	7.2
All Other	11,595	11,089	2,526	2,430	4.6	38.8	21.3
Total	155,042	143,539	27,953	28,468	8.0	12.6	13.6
STATE[a]							
Durable Goods	936,954	890,670	159,066	171,921	5.2	6.0	8.9
Accessory Dealers	192,259	190,732	32,342	36,876	0.8	3.4	6.6
Furniture	253,991	211,632	42,680	41,945	20.0	7.8	13.3
Household Appliances	135,467	133,500	24,388	24,557	1.5	7.7	12.3
Total Furniture and Appliances	389,458	345,132	67,068	66,502	12.8	7.8	12.9
Lumber and Building Materials	292,467	273,875	49,581	57,434	6.8	7.6	9.3
Hardware Stores	34,472	34,333	5,800	6,572	0.4	5.2	4.4
Total Lumber, Building Materials & Hardware	326,939	308,208	55,381	64,006	6.1	7.3	8.8
Nondurable Goods	5,940,494	5,631,181	1,061,249	1,092,505	5.5	8.9	8.0
Apparel	436,177	415,539	77,081	71,468	5.0	6.1	5.1
Drug Stores	230,685	219,375	38,223	36,648	5.2	2.3	-1.7
Eating and Drinking Places	906,828	845,102	158,051	166,826	7.3	8.8	6.1
Food Group	1,935,544	1,834,792	365,030	377,449	5.5	18.4	17.7
Gasoline	679,469	656,927	113,129	122,837	3.4	2.6	7.3
General Merchandise Group	1,402,438	1,348,331	246,116	244,669	4.0	2.9	2.1
Total Retail Trade	6,877,448	6,521,851	1,220,315	1,264,426	5.5	8.5	8.1

[a] Total includes data for categories not shown in the table.

RETAIL TRADE IN SELECTED CITIES
($000)

					Percentage Change		
	6 Mos. '90	6 Mos. '89	June '90		6 Mos. '90/'89	June/May '90	
Retail Trade	Adjusted	Adjusted	Adjusted	Unadjusted	Adjusted	Adjusted	Unadjusted
Ada	63,690	59,161	11,519	11,835	7.7	9.5	10.4
Altus	49,571	46,555	9,796	9,104	6.5	10.3	9.1
Alva	17,456	15,874	3,201	3,437	10.0	17.3	23.5
Anadarko	20,966	19,696	3,755	4,100	6.4	12.1	17.0
Ardmore	90,722	82,371	15,694	16,109	10.1	3.1	2.1
Bartlesville	117,070	106,525	21,899	22,176	9.9	18.3	19.1
Blackwell	14,587	13,714	2,663	2,784	6.4	10.1	15.8
Broken Arrow	118,475	110,720	20,743	22,026	7.0	11.9	10.7
Chickasha	49,189	44,732	8,651	9,094	10.0	6.9	7.2
Clinton	27,510	25,336	4,966	5,266	8.6	7.5	13.3
Cushing	23,451	21,908	3,770	4,139	7.0	-3.5	-3.8
Del City	57,373	57,035	10,427	11,852	0.6	20.3	30.9
Duncan	72,362	67,409	12,383	13,033	7.3	7.0	3.0
Durant	49,636	42,518	8,734	9,238	16.7	7.8	14.4
Edmond	138,352	118,631	25,946	26,256	16.6	10.0	9.0
Elk City	37,961	33,749	6,662	6,853	12.5	9.6	14.4
El Reno	35,889	33,202	6,369	6,678	8.1	4.4	2.7
Guthrie	25,593	25,326	4,714	5,136	1.1	14.7	16.3
Guymon	25,744	22,406	5,190	5,354	14.9	15.8	10.0
Henryetta	23,609	21,461	4,407	4,786	10.0	14.1	13.3
Hobart	13,048	12,605	2,233	2,421	3.5	5.4	9.6
Holdenville	9,905	9,656	1,703	1,750	2.6	5.3	3.4
Hugo	18,155	16,442	3,036	3,068	10.4	2.4	-1.4
Idabel	24,807	22,767	4,645	4,740	9.0	16.0	14.9
Lawton	207,043	201,244	37,021	37,782	2.9	8.4	7.4
McAlester	59,209	53,321	11,234	11,484	11.0	19.6	16.3
Miami	46,349	43,700	7,744	8,057	6.1	1.9	3.9
Midwest City	205,488	196,378	35,395	35,535	4.6	5.8	2.2
Moore	80,573	76,229	14,153	14,300	5.7	4.8	3.4
Muskogee	130,736	120,438	23,204	23,926	8.6	10.2	13.7
Norman	188,912	176,900	36,513	36,951	6.8	19.5	22.9
Oklahoma City	1,274,684	1,916,263	217,159	226,609	6.6	4.8	8.3
Okmulgee	24,707	22,620	4,908	5,163	9.2	41.6	41.3
Pauls Valley	27,664	24,775	5,247	5,587	11.7	14.6	19.8
Pawhuska	10,768	10,208	1,883	2,264	5.5	8.2	23.4
Ponca City	93,463	85,186	16,346	17,127	9.7	7.0	12.3
Poteau	30,226	26,994	5,136	5,363	12.0	6.2	7.4
Sand Springs	52,184	47,377	10,443	10,643	10.1	39.1	32.5
Sapulpa	48,650	46,349	9,505	9,826	5.0	38.6	33.7
Seminole	22,470	20,953	4,079	4,411	7.2	12.5	15.0
Shawnee	124,294	116,175	21,437	21,864	7.0	4.8	-0.1
Stillwater	98,802	91,816	17,658	17,004	7.6	6.8	5.4
Tahlequah	44,962	39,746	7,623	7,896	13.1	5.3	2.9
Tulsa	1,335,677	1,211,708	231,231	238,888	10.2	5.1	10.5
Watonga	7,779	7,202	1,391	1,517	8.0	8.8	14.8
Weatherford	35,236	34,075	5,894	6,241	3.4	3.0	4.8
Wewoka	5,970	5,970	1,068	1,129	0.0	16.8	15.0
Woodward	54,387	49,484	9,552	9,908	9.9	7.9	8.7
Total Selected Cities	5,335,354	4,934,910	937,928	970,709	8.1	7.9	10.2

Sources for all tables: Local utilities companies; 10th Federal Reserve District Member Banks; Federal Home Loan Bank of Topeka; Oklahoma Employment Security Commission; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, *Progressive Report of the Transportation Director;* Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by John McCraw, Statistician for CEMR and Brian Hickey, Data Analyst.

Printed by University Printing Services. Seven hundred copies were prepared and distributed at a total of $500.00. Cost to the taxpayers of the State of Oklahoma: $312.00. September 1990.

The *Oklahoma Business Bulletin* is published each month by the Center for Economic and Management Research, 307 West Brooks, Room 4, Norman, Oklahoma 73019. September 1990, volume 58, number 9. Second class postage paid at Norman, Oklahoma 73070. Postmaster: Send address changes to the *Oklahoma Business Bulletin*, 307 W. Brooks, Room 4, Norman, Oklahoma 73069.

EQUAL OPPORTUNITY STATEMENT

This institution in compliance with Title VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and other Federal laws and regulations does not discriminate on the basis of race, color, or national origin, sex, age, religion, handicap, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

ENID AND LAWTON MSAs

Category	6 Mos. '90	6 Mos. '89	June '90	Percentage Change 6 Mos. '90/'89	Percentage Change June/May '90
ENID MSA					
Employment (Number)					
Labor Force[a]	27,596	27,738	28,700	-0.5	2.9
Total Employment	26,637	26,300	26,675	1.3	-0.2
Unemployment Rate (%)	4.5	5.2	3.6	—	—
Wage and Salary Employment	21,500	21,400	21,800	0.5	1.9
Wholesale and Retail Trade	6,300	6,100	6,400	3.3	1.6
Manufacturing	1,500	1,600	1,500	-6.3	0.0
Industrial Power Sales (000 Kwh)	221,161	224,131	39,290	-1.3	[illegible]
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	1,619	538	480	200.9	—
Number of Units	16	5	5	220.0	—
Residential—Multi Family					
Dollar Value ($000)	0	300	0	—	0.0
Number of Units	0	6	0	—	0.0
Nonresidential					
Commercial ($000)	321	1,059	24	-69.7	-3.7
Industrial ($000)	50	0	0	—	0.0
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	1,940	4,372	314	-55.6	—
All Other Nonbuilding ($000)	73	131	39	-44.3	129.5
Total Construction ($000)	4,003	6,401	857	-37.5	E
LAWTON MSA					
Employment (Number)					
Labor Force[a]	48,538	47,696	50,600	1.8	2.6
Total Employment	45,633	45,233	48,050	1.3	3.4
Unemployment Rate (%)	5.6	5.2	5.0	—	—
Wage and Salary Employment	34,800	34,000	34,900	2.4	-0.3
Industrial Power Sales (000 Kwh)	105,598	97,127	19,648	8.7	8.9
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	3,865	3,805	538	1.6	62.3
Number of Units	39	38	5	2.6	25.0
Residential—Multi Family					
Dollar Value ($000)	0	0	0	0.0	0.0
Number of Units	0	0	0	0.0	0.0
Nonresidential					
Commercial ($000)	4,105	1,772	0	131.7	0.0
Industrial ($000)	2,470	191	0	E	0.0
Institutional ($000)	0	0	0	0.0	0.0
Nonbuilding					
Streets and Highways ($000)	422	567	225	-25.5	—
All Other Nonbuilding ($000)	0	3.8	0	—	0.0
Total Construction ($000)	10,861	6,372	763	70.5	130.0

Note: Includes revisions.

[a] Civilian Labor Force.

E = Exceeds 600 percent.

MUSKOGEE MA

Category	6 Mos. '90	6 Mos. '80	June '90	Percentage Change 6 Mos. '90/89'	Percentage Change June/May '90
Employment (Number)					
Labor Force[a]	30,525	30,738	31,050	-0.7	1.4
Total Employment	28,425	28,275	29,200	0.5	2.2
Unemployment Rate (%)	6.9	8.0	6.0	—	—
Industrial Power Sales (000 Kwh)	88,342	84,300	14,687	4.8	-4.8
Port of Muskogee					
Tons in	35,287	56,731	2,734	-37.8	E
Tons out	67,413	25,785	17,174	161.4	E

Note: Includes revisions.

[a] Civilian Labor Force.

E = Exceeds 600 percent.

TULSA MSA

Category	6 Mos. '90	6 Mos. '89	June '90	Percentage Change 6 Mos. '90/'89	Percentage Change June/May '90
Employment (Number)[a]					
Labor Force[b]	345,200	335,500	360,400	2.9	2.8
Total Employment	325,600	313,500	342,900	3.9	3.5
Unemployment Rate (%)	5.7	6.6	4.9	—	—
Wage and Salary Employment	312,900	301,200	318,700	3.9	0.8
Manufacturing	53,700	52,300	54,500	2.7	0.9
Mining	12,300	12,400	12,400	-0.8	0.8
Government	37,300	37,000	38,300	0.8	0.3
Wholesale and Retail Trade	74,400	71,900	75,800	3.5	0.8
Average Weekly Earnings					
Manufacturing ($ Per Worker)	464.60	421.64	463.68	10.2	-0.5
Industrial Power Sales (000 Kwh)	1,209,598	1,151,217	216,229	5.1	7.7
Air Transportation					
Passengers Enplaning (Number)	726,951	676,778	140,264	7.4	4.2
Passengers Deplaning (Number)	735,954	690,765	141,137	6.5	3.9
Freight (Tons)	16,181	13,004	3,034	24.4	4.8
Water Transportation					
Tulsa Port of Catoosa					
Tons In	256,778	328,605	46,266	-21.9	248.2
Tons Out	616,503	552,843	81,284	11.5	55.1
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	75,119	74,317	11,282	1.1	-10.1
Number of Units	933	933	138	0.0	-11.0
Residential—Multi Family					
Dollar Value ($000)	9,047	82	8,971	E	—
Number of Units	302	4	300	E	—
Nonresidential					
Commercial ($000)	33,804	15,807	1,272	113.9	-70.3
Industrial ($000)	56,424	11,163	166	405.5	-97.2
Institutional ($000)	4,385	10,541	0	-58.4	—
Nonbuilding					
Streets and Highways ($000)	5,145	19,463	2,540	-73.6	279.2
All Other Nonbuilding ($000)	1,903	1,642	521	15.9	251.5
Total Construction	185,727	133,014	24,652	39.6	4.5
General Business Index	97.8	92.4	97.9	5.8	-0.5

Note: Includes revisions.

[a] Preliminary.

[b] Civilian Labor Force.

E = Exceeds 600 percent.

OKLAHOMA CITY MSA

				Percentage Change	
Category	6 Mos. '90	6 Mos. '89	June '90	6 Mos. '90/'89	June/May '90
Employment (Number)[a]					
Labor Force[b]	505,600	496,200	521,300	1.9	1.9
Total Employment	480,000	471,300	498,300	1.8	2.5
Unemployment Rate (%)	5.1	5.0	4.4	—	—
Wage and Salary Employment	428,600	419,500	431,000	2.2	-0.5
Manufacturing	47,600	48,700	47,900	-2.3	1.1
Mining	10,800	10,900	10,500	-0.9	-1.9
Government	103,200	99,400	101,500	3.8	-3.5
Wholesale and Retail Trade	103,400	102,800	104,200	0.6	0.2
Average Weekly Earnings					
Manufacturing ($ Per Worker)	488.49	491.65	498.17	-0.6	8.3
Industrial Power Sales (000 Kwh)	611,336	603,768	104,858	1.3	1.1
Air Transportation					
Passengers Enplaning (Number)	757,527	739,222	144,337	2.5	2.0
Passengers Deplaning (Number)	773,851	745,122	150,833	3.9	4.0
Freight Enplaned (Tons)	5,258	3,737	965	40.7	7.8
Freight Deplaned (Tons)	7,440	4,757	1,289	56.4	-7.7
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	111,068	85,111	20,730	30.5	-18.9
Number of Units	1,284	974	239	31.8	-14.0
Residential—Multi Family					
Dollar Value ($000)	670	21,116	0	-96.8	0.0
Number of Units	32	482	0	-93.4	0.0
Nonresidential					
Commercial ($000)	20,971	19,901	4,267	5.4	-39.6
Industrial ($000)	1,431	2,454	20	-41.7	-44.4
Institutional ($000)	2,065	6,269	196	-67.1	6.8
Nonbuilding					
Streets and Highways ($000)	57,837	12,885	12,466	348.9	149.2
All Other Nonbuilding ($000)	1,375	1,256	278	9.5	-31.3
Total Construction ($000)	195,416	148,992	37,956	31.2	-0.8
General Business Index	95.2	95.0	96.9	0.2	5.6

Note: Includes revisions.

[a] Preliminary.

[b] Civilian Labor Force.

Business Highlights

DAVID PENN

THE ECONOMIC RECOVERY that began in 1988 continued during the first six months of 1990 but with some important differences. For example, the manufacturing sector no longer supplied a major growth impetus for the state's economy, reflecting national weakness in this sector. Instead, the fastest growing sectors for employment included mining, retailing, and construction. Manufacturing employment rose just 0.8 percent from the first six months of 1989, while employment in the mining, construction, and retail sectors grew by 4.0 percent, 3.5 percent, and 1.9 percent, respectively. The virtual absence of employment gains in government kept total wage and salary employment growth down to a modest 1.2 percent from one year earlier.

The labor market continues to improve: the unemployment rate dropped to an average of 5.7 percent during the first half of 1990, compared with 6.2 percent one year earlier. The decline in the unemployment rate was particularly encouraging since it was caused by a strong rise in employment and not a drop in the labor force due to outmigration. Further drops in the unemployment rate should continue in 1990, but at a much slower rate of improvement due to the increased amount of slack in the U.S. economy.

Retail sales in the Tulsa, Oklahoma City, Enid, and Muskogee metropolitan areas showed remarkable percentage gains, with more modest increases statewide. Retail sales in the Oklahoma City metropolitan area grew 7.6 percent from a year earlier and 9.7 percent more than the second half of 1989, seasonally adjusted. Seasonally adjusted sales in the Tulsa metropolitan area jumped 9.1 percent compared with the first six months of 1989 and rose 7.0 percent from the second half of 1989. Similarly, sales in Enid and Lawton gained 7.2 percent and 8.0 percent, respectively, from the first half of 1989.

Interestingly, sales from lumber stores and apparel sales grew at or near double digit rates in four of the five metropolitan areas. General merchandise experienced large gains in the Tulsa, Enid, and Muskogee areas with increases of 13 percent or more.

Metropolitan area sales should continue their strong performance through July, with slower rates of growth expected during the third and fourth quarters of 1990. The large increases in fuel costs that began in August will take a toll on the consumer, undoubtedly resulting in slower increases in discretionary consumer purchases during the third and fourth quarters of 1990.

Large percentage gains appeared to be reasonably widespread among the 48 individual cities that are tracked in the *Oklahoma Business Bulletin*. Compared with the first half of 1989, 30 cities experienced increases of 7 percent or more; 13 of these cities enjoyed increases of at least 10 percent.

Statewide, however, retail sales increased by a moderate 5.5 percent from the first half of 1989. Compared with the second half of 1989 seasonally adjusted sales dropped slightly, falling by 0.5 percent.

As for construction, the total value of contracts increased 10.4 percent from the first half of 1989. The biggest gains occurred in the commercial, industrial, and residential single family categories. Virtually all the increase in the number of new single family homes occurred in the Oklahoma City metropolitan area, while the Tulsa area experienced most of the dollar increases in commercial and industrial construction.

During the next six months, the Oklahoma economy will probably experience continued growth, but at a slower pace. Higher oil prices will exert a negative net influence on economic activity, raising transportation costs for households, businesses, and government. The oil and gas production sector will eventually increase activity in response to higher prices, but this response will require a number of months and a perception of permanently higher, stable oil prices.

Further weakness in the national economy will, of course, slow the Oklahoma economy even more. However, if the U.S. economy should slip into recession during the next six months, the Oklahoma economy should perform relatively well compared with most other states. The business sector in Oklahoma survived the very lean years from 1982 to 1988 by cost cutting and downsizing. And businesses have expanded only gradually during the period of growth from 1988 to 1990. Thus, Oklahoma businesses should not require drastic measures in order to adapt to a renewed period of economic slack.

David Penn is Assistant Director for the Center for Economic and Management Research.

An Analysis of Oklahoma's Economy

CRAIG KNUTSON

THE FOLLOWING IS AN ANALYSIS of the economy for Oklahoma and its two largest metros during the 2nd quarter 1990. The analysis will cover six subsectors of the economy, with the energy subsector carrying the greatest amount of weight first, followed by the remaining subsectors in decreasing importance to the GBI. A look at the 3rd quarter 1990 is offered based upon preliminary data and professional intuition.

Energy

The Energy Subsector declined 0.3 percent from the 2nd quarter of 1989 and was off 2.7 percent from the 2nd quarter of 1988. This quarter's decline continues a significant string of year-over-year declines, signifying that the energy sector, without a violent jolt, isn't likely to improve. Luckily for the industry (not for the consumer), the "jolt" occurred in the 3rd quarter, of which I will discuss later in this section. However, through the 2nd quarter, bad news was as plentiful as the supply of oil, which helps explain why the news was so bad!

Three of the five variables used in the analysis of this Subsector actually posted year-over-year gains. The overall decline of 0.3 percent (which, by the way, is quite insignificant) is attributable to a sizeable decline in gross production tax collections (-13.3 percent) and a smaller decline in Intent-to-Drill Permits (-4.4 percent). Those declines were not enough to offset gains in rig activity (+7.6 percent), employment in oil and gas extraction (+3.6 percent), and seismic crew activity (+2 percent). Heading into what is traditionally a very weak quarter, the indicators were typically mixed, with a downward trend quite noticeable.

At the beginning of the 2nd quarter, *Business Week* ran an article entitled "The Saudis make ready to open the Spigots." The article dealt with production declines in the U.S. and the U.S.S.R. and how the 1990s will be a seller's market for oil. Given the unforeseen Iraqi invasion of Kuwait four months later, the article should have lessened the fears the energy futures markets reflected in August and September. The Saudis are *capable* and *willing* to increase production, whether for domestic- or foreign-policy purposes. Oil prices have risen from a 2nd quarter low of $14+/barrel to $28+/barrel levels today, and that increase has been very beneficial to the Saudi economy, regardless of the cause. The 2nd quarter was difficult for energy producers due to warmer weather, flat demand (weaker economic growth), and overproduction on the part of OPEC (over 24 million barrels/day at one point). By the end of June, Oklahoma oil prices had reached an 18 month low ($15.25), over $7/barrel lower than just 5 months ago. Oh, volatility...! And we wonder why investments in the energy sector are so hard to come by!

While the President was ordering a ban for offshore drilling at the close of the 2nd quarter, natural gas drilling in the Arkoma Basin was booming (despite depressed prices). While the year-to-date production levels for oil were off almost 9 percent through June, natural gas was off a scant 1 percent, with production on the rise. The drilling must be a function of longer-term profitability potential, because natural gas prices in Oklahoma hit a five and one-half year low in August, dropping to $1.20/million BTU. Sluggish demand and intense competition were the primary culprits, factors that other commodity and non-commodity items face day to day as well. Prior to the Iraqi invasion, the "World Oil" Survey was predicting a 17.4 percent rise in oil and gas drilling in Oklahoma during the 2nd half of 1990. While that estimate might now seem low in light of recent international trends, rig counts during the month of August never reached the 130 level. With July's numbers equally weak, 17.4 percent might be optimistic!

Intuitively, however, rig activity should show substantial improvement given the price escalations during the past seven weeks. On July 25, Oklahoma Sweet was selling for $19.50/barrel; by August 6, Sweet was selling for $26.75. Seventeen days later, the price had reached $30.75/barrel. Thus, in a matter of a month, oil prices had risen 58 percent. Gasoline prices (at the pump), however, had risen a little more than 30 percent. Gas Pump Economics 101 (replacement costs) and Market Capitalism tell us that we, as consumers, have not paid the full price of the refined product we use for transportation, despite the healthy increases we've already faced. While this is not a defense of the oil industry, the facts are that the "last-in first-out" method of accounting inventory causes companies to price their product according to the cost of replacing them, not according to historical cost. The debate continues as to "who's ripping who," but the reality is that prices have risen at both ends of the chain (crude and refined). The bigger question now seems to be that we've entered "Oil Crisis III" without an energy plan; do we prepare to plan now or wait for "Energy Crisis IV?"

What impact will the Energy Subsector have on the 3rd quarter GBI? A positive one, but not nearly as strong as many might expect. Two reasons. One has to do with investment, the other with production. From an investment standpoint, who is going to finance the next "energy boom" in Oklahoma? Not the banks; not here in the state and certainly not those in Seattle, Chicago, New York, etc. Since Penn Square went under in July 1982, 110 banks have failed in this state. Many of those failures were tied directly to energy; many others indirectly (especially real estate investments due to expected $40-50 oil and continued in-migration). The banking community is not only more conservative, but the tax codes have changed and most institutions are much less healthy (financially). The combination does not bode well for those seeking to take advantage of higher oil prices. Long-term stability is almost a requirement of financial institutions. The energy industry has not, historically, been able to meet that criterion. With prices still gyrating around as we end the 3rd quarter, the banking and investment community will remain wary (and rightfully so).

The second reason has to do with production. Not only are reserves more plentiful than they've ever been, but as late as July 30, reports like "OPEC May Face Long Wait To See Higher Oil Prices" were the rule not the exception. While Iraq was demanding $21/barrel oil (up from the OPEN-agreed $18 level), realities such as "bloated inventories," weak demand," and "quota cheating" were affecting Iraq's stated desire for higher oil prices. As William Hermann, Chief Economist of Chevron Corp., stated the day before the Iraqi invasion: "Reality has set in. There's a big overhang of stocks; there's a lot of oil out there." Despite the 4+ million barrel/day taken off the market since the invasion, OPEC and non-OPEC producers have agreed to make up the difference. Even the State of Texas has agreed to raise its production levels, permitting oil wells to produce beyond their restricted levels for 90 days. If that is not enough, the Saudis have discovered rare deposits of a rare, super-light oil that "may be the biggest field in the world." Conservative estimates are that the Saudis will have the capacity to produce up to 10 million barrels/day before 1994; its OPEC quota is 5.4 million barrels/day and its September production level is 7.2 million barrels/day. Supply-demand imbalance, continued!

The loss will be made up and demand, at these higher prices, will decline. The combination of the two will yield lower prices, even as we approach the winter season. "Fear" is controlling prices more than "market conditions" themselves. Controlling 4.3 million barrels/day of oil production does nothing for Saddam Hussein if he can't sell it. As an energy economist recently wrote: "Saddam may be evil, but he is not stupid. He does not want to seize the oil fields only to leave them idle. He wants them so he can sell their oil." I look for a quick end to this situation, with oil prices falling back to the $20-23 level before year's end. If that occurs, the Energy Subsector will have little positive impact on the GBI. If, however, prices remain high, the Subsector will provide a boost to the GBI, only to be taken away due to decreased activity in the consumer and export sectors of the state's economy. Lower oil prices are *good* for Oklahomans as well.

Manufacturing

The Manufacturing Subsector posted a 7.4 percent increase over the 2nd quarter of 1989. The rise was attributable to gains in employment, purchases of industrial machinery, and a decline in weekly hours worked. The latter indicator is negatively correlated in this model, meaning that a decline in weekly hours worked boosts the Subsector. During "good times," manufacturers hired new workers, instead of working longer hours. Just the opposite was true when economic conditions worsened. Employers, not wishing to incur additional costs due to training and benefits, worked their employees longer. In general, the Manufacturing Subsector reversed the trend of previous quarters, bucking the national trends.

As we approach the end of the 3rd quarter, it is useful to reflect back to the early 80s when the chants of "U.S. Manufacturing is Dead" were so prevalent. We are beginning to hear them again. Premature? I think so. *The Wall Street Journal* ran an article in early August stating that "Factory Orders In June Slipped By a Steep 1.5 Percent." While that article may be factually correct, the word "steep" did not need to appear. The article for the previous month simply stated that "Factory Orders Were Up 2.1 Percent During May." Not sharply up, just up. By the way, the May number was revised "up" .1 percent and the July number showed an "increase" of 1.6 percent. Similar trends were found in the durable goods industry, with March's number up 6.7 percent, April's down 4.2 percent, May's up 4.2 percent, followed by June's decline of 3.2 percent, then July's 2.9 percent rise. The net effect is about a 4 percent increase since April. What all the numbers say is that, since April, the manufacturing sector, as measured by output, is "up." So, while the U.S. has lost over 300,000 manufacturing jobs since the beginning of 1989, factory orders (therefore, imported capital) continue to expand. Output per employee is expanding, signifying that the investments in new plant, equipment, and training of the past are yielding the productivity gains we are now seeing in many of the manufacturing numbers.

The keys to future growth in the industry are the trade-weighted value of the U.S. dollar, the strength of foreign markets, the quality of products/services, and productivity gains. The dollar continues to weaken against the Pound, the Yen, and the Mark. For those businesses that do a lot of business overseas, the slumping dollar has been profitable. The weak dollar gives U.S. exporters a price advantage against foreign competition, while also making foreign profits fatter when translated into dollars. With many foreign economies growing much faster than our own, exporting makes good "cents." Furthermore, foreign exporting has a substantial positive impact on employment. According to a recent study done by Villanova University on export employment multipliers, "in the aggregate, the foreign export employment multiplier was almost five times larger than the domestic export multiplier." That alone should prod businesses and governments into globalizing their companies and outlook.

Here in Oklahoma, the manufacturing sector continues to grow, both in terms of output and employment. The Oklahoma DOC reported that over $128 million in new and expanded manufacturing investment was announced in the 2nd quarter of this year. The investment numbers are: $191+ million and over 2,200 jobs. While the YTD totals for 1990 are well below 1989 levels, that is a function of a strong 1989, the largest first half investment total in the decade of the 80s. The strong announcement numbers reported over the past several years are a primary reason why our manufacturing base has expanded, not declined as the nation has done. Quality-driven companies, both large and small, have positioned themselves within the global marketplace, and, in so doing, have eluded the layoff and closing syndrome faced by so many. Whether it's autos, tires, or hard drives for computers, Oklahoma manufacturers have competed very well.

The recently released Grant Thornton Manufacturing Climates Study provided some explanations as to why we have been relatively more successful; our business climate has improved. We have a low tax burden (13th lowest), energy costs (4th lowest), and have made positive improvements in several governmental and labor costs categories. Unfortunately, our state ranked 40th in the "availability and quality of education." As the report stated, education ranked second only to wages as the most important variable: "Manufacturers are also feeling the pinch of educational systems that produce workers that can neither read, write, nor perform simple arithmetic. Teaching their employees such basic skills is a substantial cost." In the 1988 report, education ranked 8th in importance. Next year, it may be number one.

As some of us in the economic development area have been saying for quite some time, if low tax burdens and energy costs were the primary engines of industrial growth, we would be an economic oasis. Productivity gains are the key to our nation's competitiveness, and productivity means investment in human and physical capital (people and equipment), not reductions in costs. Even the manufacturers of this country are recognizing that. A recent article written by Edmund Faltermayer for *Fortune* closed with this: "Japan and West Germany have proven that a country with a superior labor force needs neither raw materials nor Lebensraum. It's a bit like the real estate man's classic rule about location. The way to keep American industry from being submerged in the rising tide of world competition is education, education, education."

In conclusion, it is important to note that the National Association of Purchasing Managers monthly gauge of manufacturing health has been below the magical 50 percent level 13 of the past 16 months (only the 2nd quarter months provided numbers above 50 percent). We continue to lose market share to foreigners as well. But, when market shares used to be 90-96 percent, depending upon the industry, some loss has to occur. It is important to note that, despite all the negative numbers, the manufacturing sector today contributes just about the same proportion of total output of the American economy as it did three decades ago. And in that period, the economy has grown more than four times. Manufacturing may be weak, but it's not dead!!

Consumer Demand

The Consumer Demand Subsector posted a 0.9 percent improvement from last year's level, continuing a positive growth trend for the state as well as both metros. Despite a meager 0.4 percent decline within the General Merchandise area, both the Apparel and the overall Sales Tax Collection numbers were up (all numbers are adjusted for both tax rate increases and inflation). Tax collection and retail trade numbers were also up in both Oklahoma City and Tulsa. Their performances far outstripped the 1-2 percent increases seen in the statewide numbers, signifying that rural to urban migration patterns continue. People migrate to where employment and wage opportunities are greatest. According to the help wanted indexes in both metros (especially Tulsa's), there is little wonder why these areas are demonstrating relatively strong consumer patterns.

The Conference Board's Consumer Confidence Index peaked in April and then fell (in June) to a level that was 12.5 percent below 1989's level. The Conference Board breaks the U.S. into nine regions. In the 2nd quarter, only three regions posted year-over-year gains, and the West South Central was one—up 9 percent (the West North Central and Mountain were the others). The biggest decliner by far was New England, down a whopping 51 percent! The theory of "rolling" or "regional" recessions is far more credible as we continue to grow overall yet see regional fluctuations of this magnitude.

The Oklahoma consumer demand numbers were, for the most part, double digit increases when compared to a year ago (nominally speaking). The Governor, the Finance Director, and the mayors of our largest metros were all elated with the rates of growth, exceeding even their expectations. With personal consumption representing almost two-thirds of GNP (and a like percentage here), Oklahoma's growth rate (albeit slight) is easily explainable. There were 1,172,300 workers in the State of Oklahoma at the close of the 2nd quarter; that is 65,500 more workers than just three years ago. With more workers, working at slightly higher real wages, having a relatively healthy outlook on the economy (especially now with $30+ oil!), is it any wonder why the GBI continues to expand? For the first half of the year, tax collections returned to Oklahoma City and Tulsa were up 13.5 percent and 11.6 percent, respectively. The State's increase was 11.8 percent.

So, despite sluggishness at the national level, with auto sales down and future concerns about the economy up, Oklahoma's consumers are enjoying their disposable incomes much more. Being employed, more credit conservative than most, and not impacted as severely by the high costs of living afflicting the two coastal areas, the outlook for the immediate future is, *relative to others*, bright. With U.S. personal income growth in July at 0.6 percent and spending up 0.5 percent, the consumer hasn't thrown in the towel. Installment payments as a percent of overall disposable income is declining and delinquency rates on various forms of credit are too. Debt service is still a problem among consumers, but much less so in this state.

Construction

The Construction Subsector was unchanged from last year, which means there is still very little new activity occurring in the state. Again, that is a positive indicator. While we have had healthy job gains, nowhere is the principle of "supply/demand imbalance" more apparent that in the real estate markets of this state (for that matter, of this nation). The supply of units/space is still so plentiful that, with the exception of perhaps the industrial sector, little new activity is justified, and, therefore, expected.

The indicators offset one another this quarter. While residential permit activity and tax collections on the sale of building material showed gains of 4.4 percent and 2.9 percent, respectively, nonbuilding activity declined (surprisingly) 4.5 percent and nonresidential activity was off 27.8 percent. The latter's weight in the Subsector is less than the other indicators, thus its sizeable decline made very little difference. With bond issues and sales tax increases at the local level up, expect to see more "infrastructure" activity in the upcoming quarters. In fact, the 2nd quarter numbers were, compared to 1988 2nd quarter numbers, up over 36 percent in current dollar terms, so the decline is more a function of an unusually strong 1989 level than a weak 1990 level. One has to be very careful when working with percentage changes. Our *annual* totals for new residential activity in the 1987-1989 period match some *months* in 1982-84 period!

Since peaking in January of this year, national housing starts have plummeted for six consecutive months, from an annual rate of 1.58 million units in July. The July level is the lowest since September 1982's level of 1.14 million units. Credit restrictions, over-building, high mortgage rates, and worsening consumer confidence all impact the trends. Residential building permit activity in the Oklahoma City metro was up 1.7 percent YTD through June and is up 3 percent YTD through August. A similar "slow growth" trend is present in Tulsa. The national decline reflects the worsening employment and expectations environment on the East Coast; our improvements are indicative of the overall economy: modest, unsensational growth.

Mortgage rates, which ranged from 10-10.6 percent during the 2nd quarter, have contributed significantly to the poor home sales performance, whether new or existing. By July, the rates fell (briefly) below the 10 percent level and homes sales, naturally, rose.

Unfortunately, as we approach the end of the 3rd quarter, mortgage rates have risen to the 10.25 percent level, causing the housing affordability index to fall. The Iraqi invasion is being blamed for the higher rates, due primarily to increased oil prices and its expected negative impact on inflation. If the mortgage rate itself doesn't get you, the discount points will. So, the 3rd quarter has not been kind to the construction or home buying markets.

Despite the nationwide problems, home sales locally have continued to grow. While the 2nd quarter numbers show only a 1 percent gain over last year's levels, they are up almost 14 percent from 1988 levels. Furthermore, home sales for the first two months of the 3rd quarter are up over 8 percent from last year. As usual, Oklahoma City and Tulsa, with median home sales prices at $54,100 and $64,400, respectively, continue to be a national bargain. In fact, there is no city in Oklahoma City's population range that has lower priced housing. For example, with the national average at $96,200, Oklahoma City is 22 percent below the national average, 75 percent below Los Angeles, 64 percent below Washington, D.C., and 69 percent below New York. And those three don't have the highest priced housing values in the U.S.!!! That dubious honor goes to Honolulu at $345,000, followed by Anaheim at $248,900. There is a great deal of value in Oklahoma housing.

Finally, one last note on the industry. With rising oil prices comes increased gross production tax collections. In the past, the windfall from the higher energy prices went entirely into the general fund for operating budgets. But, under a law enacted in 1989, the additional revenue (tax collections over $190 million) will go into the Capital Preservation and Economic Enhancement Fund. This fund was set up to address infrastructure needs of the state. So, should prices remain at their current levels and the cap be exceeded, money will be set aside for infrastructure improvements. Throughout the last half of the 80s, "nonbuilding" construction was the most active area of the industry. With the infrastructure problems this state and national face, such a fund should come in very handy and should provide construction jobs for many years to come. And we're told that government has no foresight!!

General

The General Subsector continues to show strength, rising 4.3 percent above 1989 levels and 12.6 percent above 1988 levels. With the exception of two banking indicators (Bank Stock Index and Net Income of the two largest publicly-traded banks in Oklahoma), every indicator posted gains. The two employment indicators (Wage and Salary and Services Employment) were up 1.4 percent and 2.4 percent, respectively. The unemployment rate has dropped from a quarterly average 5.8 percent last year to 5.1 percent this year. Total statewide bankruptcies are down 2.4 percent (although still high historically speaking) and unemployment insurance claims fell 1.7 percent. Finally, and perhaps most importantly, total personal income was up 3.4 percent in the 2nd quarter, continuing a string of quarterly increases dating back to 1986. In Oklahoma, jobs are being created and total and disposable income is rising, despite what you may have heard. Four years ago in this space, I was playing down our declining unemployment rate, because we weren't seeing wage and salary employment grow at the same time. Those two indicators have been moving opposite one another for over three years. That relationship indicates growth (see Figures 1 and 2).

As we began the 2nd quarter, the national debt passed the $3 Trillion mark; you just knew this was a harbinger of things to come. Sure enough, companies reduced their capital spending budget forecasts, our major trading partners were raising their interest rates, the employment, help wanted index, and retail numbers remained weak, and the Commerce Department said GNP (through its preliminary estimate) rose a scant 1.2 percent, down from the 1st quarter 1.7 level. To top all that, there was (and is) a growing nationalistic or protectionistic sentiment against foreign investment, when foreign investment in this country is one of the few growth generators we have. As Norman Glickman, a Rutgers University economist recently wrote: "Does a cluster of Japanese auto factories keep car prices down, improve worker productivity, and bring technology to the country? Probably it does." With the dollar's value weak, foreign investment will continue. In the last week, two Japanese companies announced major investments. One was the purchase of Pebble Beach Company; the other was Toyota's announcement of a second car assembly plant. All in all, a rough quarter for America.

Or was it? A recent *Wall Street Journal* editorial mentioned that "the economy can grow in two ways: putting more people to work or by making each worker produce more." Since demographics are no longer on our side with respect to the former, it is on the latter that this country must focus. They go on to say that "greater productivity is the primary engine of growth." That statement has always been true, but never has it had more relevance than today. With all the negatives we've faced and read about so far this year, the U.S. Department of Labor reported that productivity, which had declined for five consecutive quarters, jumped 1.5 percent in the 2nd quarter.

Only time will tell whether this gain is an aberration or the beginning of a trend, but the investments in new technology, equipment, training, and education (be they domestic or foreign) may be paying dividends. We have known for a long time that America boasts the highest manufacturing productivity in the world. In fact, on a per employee basis, economic output in Japan last year was 72.7 percent of the U.S. level; Canada was the closest at 94 percent!! As more U.S. companies (and foreign transplants), in both services as well as manufacturing, find new ways of spurring productivity, the economic statistics we analyze each day will improve. As Michael Porter argues in his new book *The Competitive Advantage of Nations*, the only useful measure of national economic strength is the rate of national productivity growth. I think he may be onto something!

Every major print publication has run at least one article on "Are We In A Recession?" *The USA Today*, in an August 10 article implied that we already are: "Recession expected to be mild." With exports (both services and manufactured) running at record levels, businesses still planning to invest (albeit at a lesser rate), the government running a $230 + B deficit, and the consumer still making purchases, ... I don't know, is there a recession going on? GNP is comprised of consumer purchases, government purchases, and business investments, plus or minus trade. While 1.2 percent growth is meager, it still is growth. As Ed Yardeni recently stated: "I don't think a recession is inevitable." And given the deftness with which the Fed has skirted earlier trouble spots, Greenspan et al., with the help of stepped-up military spending, should be able to steer the economy safely away from a recession.

Again, the trade-weighted value of the dollar and the strength of the international economy will determine, in the short-term, what sign our GNP growth rate numbers will have in front of them. In the long run, however, productivity gains, within industries and occupations, will need to take place before market share decline and standards of living improve. The Global Race is here. Competing successfully in the areas of quality and cost will only come through investment in productivity-enhancing technology, processes, and training. Ultimately, all these indicators (if you can even rely upon them) are a reflection of productivity. While the leading economic indicators for the nation point to more stagnation and weakness, Oklahoma's "general" set of indicators should improve once more. You know things must be improving when you find Oklahoma ranked #1 in a positive economic comparison: Oklahoma leads the nation in "Year-End FY 1991 Balances as a Percent of Spending." There are only 11 states with a projected balance of greater than 5 percent; we lead the nation at 12.9 percent, while the national average sits at 2.3 percent. Two cheers for Fiscal Responsibility!

Agriculture

The Agricultural Subsector, hit by weak grain prices, continues to show year-over-year declines. The 2nd quarter value was down 2.8 percent, primarily due to a 23 percent drop in wheat prices. Sorghum prices also posted a decline (-5 percent). Luckily, beef prices helped offset the crop weaknesses by expanding 6.6 percent from last year's levels. The commodities portion of our economy, at least until August 1st of this year, has been a negative contributor.

Why are wheat prices so puny? Remember our earlier discussion of "supply/demand imbalance?" Let's return to that subject. In July, the Agricultural Statistics Board released their estimate of the 1990 wheat crop: 207.9 million bushels. By itself, that means little. But when you compare it to the 1989 level of 153.9 million, you begin to understand what a 35 percent increase can do. The yield went from 27 bushels/acre to 33 bushels/acre in 1990 and the amount of harvested acreage from 5.7 million acres to 6.3. Increased yield on an increased number of acres, results in ... a lot of wheat. And since wheat is traded internationally and exports are a primary motive for wheat planting to begin with, what do you think happened internationally? That's right, several key wheat producing countries also had healthy harvests.

In fact, with less than half of the U.S. output used domestically, exports (and export subsidies) are critical. Unfortunately, the international situation is depressing (if you are a producer). Production is up in the Soviet Union and China, two of the largest markets for U.S. wheat. As important, however, is that major U.S. competitors will have large exportable supplies of wheat, with several planning further acreage increases. The E.C. (12 nations), Canada, Australia, and Argentina all had fair to outstanding harvests, so competition will be strong this year. With plentiful supplies and a growing world inventory, expect prices to remain weak. In fact, the USDA expects U.S. stockpiles to be up 52 percent in 1991, while stockpiles outside the U.S. are expected to rise 9 percent. One never knows what Mother Nature has in store, but, at least domestically, it appears that most of the damage from the 1987-88 droughts has disappeared. While there were many who suffered, the USDA is expecting a banner year for farm income, grossing around $165 million this year. That is a 4 + percent increase from 1989.

The beef industry has fared much better than wheat (if you are a producer). After a year of relatively strong prices, the USDA reported that cattlemen will be increasing their animal inventories, which is the natural response to high prices. Analysts have concluded that there will be no more young cattle available for beef production in the next twelve to eighteen months than there was for the last several years. Therefore, any near-term growth in supplies will be small. As Darrell Peel, market economist at OSU recently stated: "Overall, you have to consider it pretty positive for producers in this part of the country." With July's beef price at $75.10, I'd have to go back to the decade of the 1970s to find Oklahoma monthly beef prices that high, if then.

Conclusion

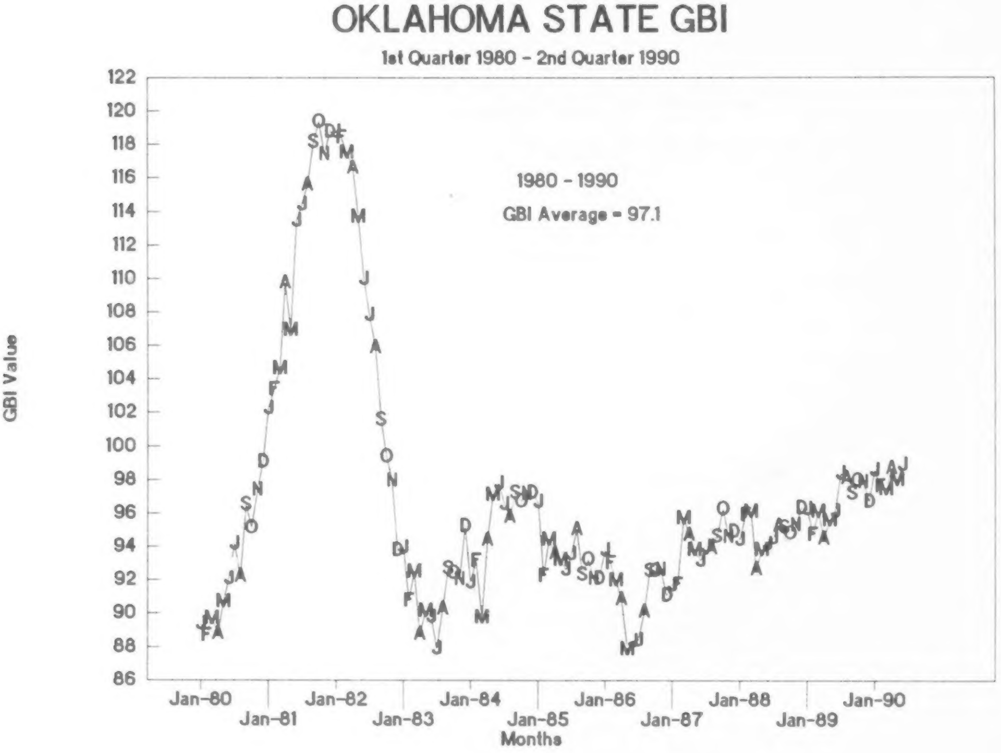
Oklahoma's economy continues to expand. Two indicators that I track quite closely seem to be saying: “slow, but steady, growth.” Both wage and salary employment and personal income continue to track upwards. I am forecasting continued growth in Oklahoma, and, since I'm a strong proponent of this state's growing interdependent relationship between national and international economic activity, you might assume I'm *not* forecasting a recession for either the nation or the world. Your assumption would be correct. But keep in mind what Donald Straszheim, Chief Economist at Merrill Lynch & Co., recently stated: “We forecast not because we know, but because we are asked.”!!!

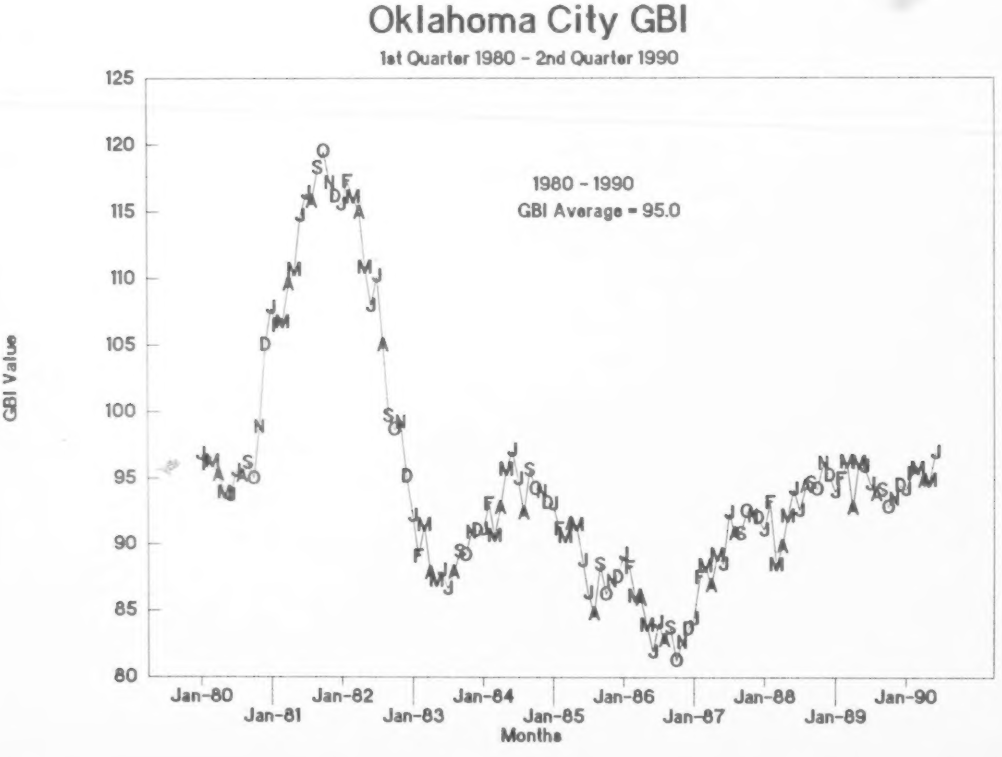
As Greg Smith, a financial analyst with Prudential-Bache recently wrote: “More and more economists are starting to forecast a recession. That in itself makes me wary because, in my experience, forecast recessions tend to be no-shows.” Let us hope for Greg, myself, and many, many others across this land that he/we are correct. I have delineated, using a forest of statistics, the ills this country faces. From debt and drug dependency to illiteracy and inflation, it often seems the bad outweighs the good. However, according to William Dunkelburg, Chief Economist at the National Federation of Independent Business, “things look bad only because we've had a decade of extraordinary growth. What we are experiencing is a period of slower growth, not a downturn of cataclysmic proportion.” There are some very real weaknesses in the economy, but inflation, YTD through July, is at 4.9 percent (less than last year's 5 percent level at this time) and June's wage and salary employment was a full 2 million ahead of June 1989. We are now in a world of “free global capital flows” where money knows no boundaries and the world savings rate is more important than those of individual countries. The Fed, despite the rise in global interest rates, seems to be refocusing their intentions toward sustaining economic growth by lowering interest rates, keeping a careful eye on inflation.

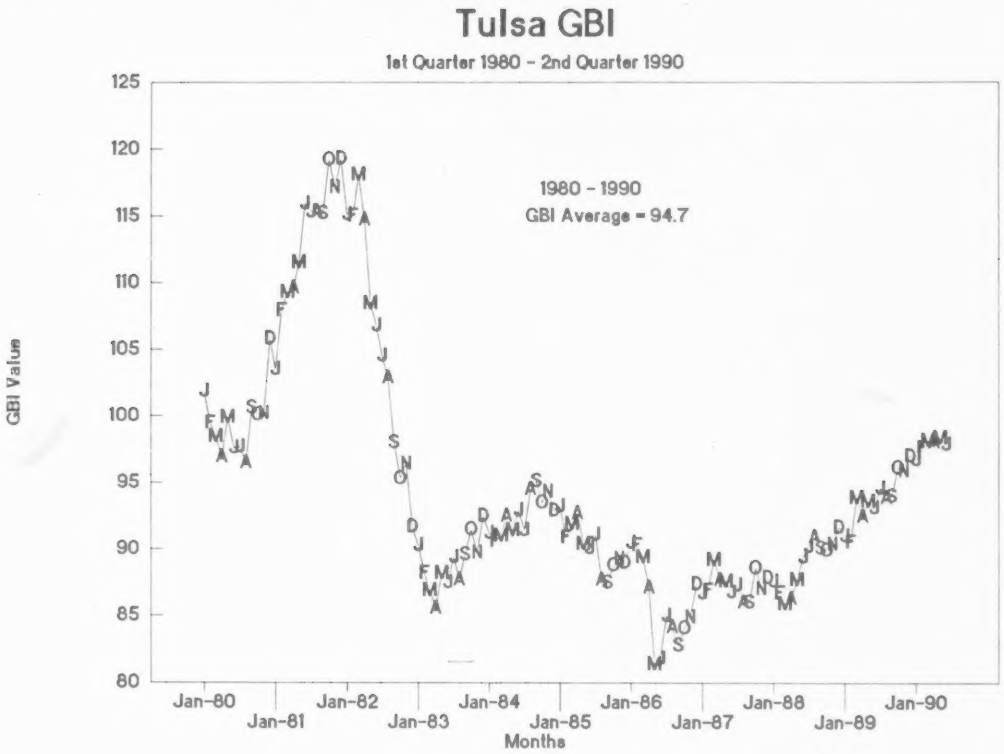
Paul Krugman, MIT professor, has a new book out entitled *The Age of Diminished Expectations*, which seems to fit the mood of most economists and economic pundits. Unfortunately, that attitude has a way of affecting the very groups that have generated the sales, investments, employment. In the semiannual “Sampling of Interest Rate, Economic, and Currency Forecasts” done by the *Wall Street Journal* in July, the consensus forecast of 40 economists was 1.6 percent growth in the 2nd half of this year, followed by 1.8 percent in the 1st half of next year. Only two economists forecasted a declining GNP for the remainder of the year, and only one for the 1st half of next year. The September Blue Chip Economic Indicators were just released (post-Iraqi invasion) and they, too, are forecasting growth for both 1990 and 1991, although 50 percent of the respondents think a recession will begin this year. Bob Eggert's advise to companies: “even more emphasis should be placed on limiting investments to areas sure to *raise productivity* and, of course, keeping inventory levels in line with customer demand.”

The most recent set of data has both the unemployment rate (5.6 percent) and productivity up (1.5 percent). David Wessel, in an April *Wall Street Journal* front page editorial, stated: “If productivity were to grow faster, employers could get by with fewer workers—and unemployment would be higher.” If the data is to be believed, that is what is occurring. To avert a recession now, substantive reductions to the deficit must occur, interest rates must come down, the dollar must remain relatively low, and the 5+ percent increase in new plant and equipment (as forecasted by U.S. businesses) needs to materialize. If we curtail capital spending, “we won't be building the productivity enhancement and the technology to improve our international competitiveness,” said to Joseph Duncan, Dun & Bradstreet's Chief Economist. These capital investments, once made, will continue to yield productivity gains so essential to sustaining long-term growth. But, in the short-term, we need to work smart, pay down our debt, and pray that the economy continues to move sideways, not down!!

Craig Knutson is Staff Economist for Southwestern Bell Telephone Company.


OKLAHOMA STATE GBI
1st Quarter 1980 - 2nd Quarter 1990
1980 - 1990
GBI Average = 97.1
GBI Value
122
120
118
116
114
112
110
108
106
104
102
100
98
96
94
92
90
88
86
Jan-80
Jan-81
Jan-82
Jan-83
Jan-84
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Months


Oklahoma City GBI
1st Quarter 1980 - 2nd Quarter 1990
1980 - 1990
GBI Average = 95.0
GBI Value
125
120
115
110
105
100
95
90
85
80
Jan-80
Jan-81
Jan-82
Jan-83
Jan-84
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Months



Tulsa GBI

1st Quarter 1980 - 2nd Quarter 1990

Employment-At-Will in Oklahoma

M. RONALD BUCKLEY
CANDICE COX
BERNARD PATRICK MARONEY
PETER C. JOHNSON

Introduction

IN YEARS PAST, EMPLOYERS believed, with judicial support, that they could terminate employees for good reasons, bad reasons, no reasons or even reasons which were considered "morally wrong."[1] The American principle of employment-at-will was generally accepted without question. This follows the precedent of master-servant in English Common Law, where employers were allowed to exercise almost complete control of the employer-employee relationship, i.e. the master had the right to discharge the servant for good, bad, or no reason.[2] Similarly, under the American principle either party to an employment contract of indefinite duration could terminate that contract at any time for any reason or for no reason. However, over the past twenty years, judicial decisions and legislative enactments have eroded the employment-at-will doctrine, leading to confusion and increased litigation regarding wrongful discharge. Since 1980, courts in almost every state have faced wrongful discharge questions and approximately thirty-five jurisdictions now recognize a cause of action for wrongful discharge. In 1986 alone, favorable verdicts were received by the plaintifs in 78 of unsettled wrongful-discharge cases in California, with an average total award of over $400,000.[3]

General Exceptions to Employment-at-Will

Courts have eroded the at-will doctrine by carving out three general exceptions; public policy, breach of implied contract, and breach of the implied covenant of good faith and fair dealing.

(1) Public Policy — an employer may be held liable for wrongfully terminating an employee if the discharge violates public policy. Cases in which the discharge violates public policy include: (a) discharge for refusing to commit an illegal act; (b) discharge for exercising a legal right or privilege; (c) discharge for performing a public obligation; and (d) discharges for motives which violate other "clear mandates" of public policy. The public policy exception is the most widely received exception to the employment-at-will doctrine and the sole exception in some jurisdictions.

(2) Implied Contract — some courts have found an implied-in-fact agreement not to discharge an employee except for "just cause." Employer representations may form an implied contractual basis for changing an at-will agreement into an agreement to terminate only for just cause. Courts have given contractual status to oral employer assurances of job security at the time of hiring; policy statements in personnel manuals also have been interpreted as agreements that employees could only be discharged for just cause.

(3) Implied Covenant of Good Faith and Fair Dealing — in recent years, some courts have adopted an exception that a termination of an at-will employee, not founded in good faith or just cause, violates an implied covenant of good faith and fair dealing in the performance and enforcement of every contract. This exception is based upon the theory that parties to contracts and commercial transactions must act in good faith toward one another. Some states have adopted the rule that good faith is assumed or implied in every contract, including employment contracts.

A 1980 California decision held that an employee's length of service gave rise to an obligation of the employer to terminate the employee only for "good cause."[4] In Montana, an employee handbook bound the employer to the handbook policies "as a matter of the covenant of good faith and fair dealing."[5]

In *Monge v. Beebe Rubber Co.,* 114 N.H. 130, 316 A.2d 549 (1974), the Supreme Court of New Hampshire held that in all employment contracts, whether at will or for a definite term, the employer's interest in running his business as he sees fit must be balanced against the interests of the employee in maintaining his employment, and the public's interest in maintaining a proper balance between the two. It further held that a termination by the employer of an employment-at-will contract is not in the best interest of the economic system or the public good where such termination is motivated by bad faith or malice or based on retaliation. (This case involved a female employee who refused advances made by her supervisor and was subsequently discharged — a fact situation which now would fall under Title VII.)

The Massachusetts view, more widely accepted, is that if an employer terminates an at-will employee for the purpose of or with the effect of depriving the employee of previously earned compensation, the employer has breached the covenant of good faith and fair dealing. *Fortune v. National Cash Register Co.,* 373 Mass. 96, 364 N.E. 2d 1251 (1977). This was the view followed by the Oklahoma Supreme Court in *Hall v. Farmers Insurance Exchange,* 713 P.2d 1027 (1985).

Employment-at-Will in Oklahoma

Oklahoma still has one of the most liberal legal definitions in the United States of an employer's right to fire a worker and terminate the "employment at will" contract between the parties.[6] However, statutory limitations and some court decisions have eroded the terminable-at-will doctrine in Oklahoma.

Statutory Exceptions in Oklahoma

Oklahoma has recognized some exceptions to the terminable-at-will doctrine in the form of statutory limitations:

(a) Under the Oklahoma Civil Rights Act, 25 O.S. §§ 1101-1801 (1981), employers are not allowed to discharge a person based on that person's age, race, or sex. The Act also protects employees who oppose discriminatory practices by an employer Id. § 1601. If an employee has been fired for his opposition to violations of the Civil Rights Act, the Oklahoma Human Rights Commission has the authority to reinstate the employee with back pay. Id. § 1505(c)(2) (Supp. 1985).

(b) Other statutes subject employers who wrongfully discharge employees to criminal liability. For instance, it is a misdemenor to discharge an employee for serving jury duty, 38 O.S. § 34 (1981); for serving in the armed forces or militia, 44 O.S. § 208 (1981); or for reporting wage and hour or safety violations, 40 O.S. § 199 (1981). An employee who institutes a claim under the worker's compensation law is also protected from retaliatory discharge and is statutorily entitled to damages. 85 O.S. §§ 5, 6 (1981).[7] It is also illegal to fire an employee because a creditor has filed a garnishment against his wages. The statute reads, "no employer shall discharge an employee... unless served with garnishment on more than two occasions within one year." 14A O.S. § 5-106.

Evolution of Case Law in Oklahoma

Some of the cases which have eroded the traditional view of employment-at-will in Oklahoma since the mid-1970s are outlined as follows:

In *Langdon v. Saga Corp.,* 569 P2d 524 (Okla.App. 1976), an employer's personnel manual was held to create a contractual basis for a terminated employee to recieve employment benefits (vacation and severence pay). Additionally, the court stated:

> The employer remains free to modify such policies prospectively and to the extent there is no accrual, as in the case of vacation and severance pay in the instant contract. We thus conceive personnel policies extending benefits as unilateral offers which are accepted by continued performance.

In *Vinyard v. King,* 728 F.2d 428 (10th Cir. 1984), the Tenth Circuit, applying Oklahoma law, held that a written employee handbook specifying that permanent public employees would not be discharged without cause created a property right in the employee's continued employment. Failure to hold a hearing to determine if cause existed for the employee's termination was found to be in violation of 42 U.S.C. § 1983.

Hall v. Farmers Insurance Exchange

Hall v. Farmers Insurance Exchange, 713 P.2d 1027 (Okla. 1985), was a case which struck fear into the hearts of employers in Oklahoma. The Oklahoma Supreme Court held that Farmers had breached an implied covenant of good faith when it terminated Hall's agency contract.

According to the court, the central issue was "whether a party to a contract which is terminable at will... may be held liable for damages if such termination is done in bad faith." However, the court's discussion has broader implications:

> This Court has long recognized that parties should be free to contract for any lawful purpose upon such terms and conditions as they believe to be in their mutual interest. Such freedom is not absolute however, and the interests of the people of Oklahoma are not best served by a marketplace of cutthroat business dealings where the law of the jungle is thinly clad in contractual lace.
>
> In this spirit, we have recognized, as have many jurisdictions, that each contract carries an implicit and mutual covenant by the parties to act toward each other in good faith....
>
> A contract consists not only of the agreements which the parties have expressed in words, but also of the obligations which are reasonably implied.... Every contract contains implied covenants that neither party shall do anything that will destroy or injure another party's right to receive the fruits of the contract.[8]

Hall's discussion of employment law was unnecessary, not only because Hall was an insurance agent rather than a traditional employee, but also because he sought recovery for future earnings based upon work already performed.[9] A similar situation was presented in *Fortune v. National Cash Register Co.*, 373 Mass. 96, 364 N.E.2d 1251 (1977), where an at-will salesman was fired after a major sale. The court found the motivation for the termination was to pay as little of the salesman's earned commissions as possible. Although the case is often cited as an example of the erosion of the at-will rule, the court really just awarded damages in an amount that compensated the salesman for the commissions the company wished to withhold. Neither *Fortune* nor *Hall* required major reconstruction of the at-will doctrine to justify compensatory damages. The insurance company and the employer can retain the power to fire "at will," "for good reason, bad reason or no reason," without keeping the right to deny the salesman's reward for past work—earned commissions.[10]

The *Hall* decision sparked controversy in Oklahoma because it was unclear whether the Oklahoma Supreme Court intended to overrule precedent which found no employer liability in termination of at-will employees.

Grayson v. American Airlines

One year after *Hall* in another at-will case, *Grayson v. American Airlines,* 803 F.2d 1097 (10th Cir. 1986) (incorrectly interpreted, as was later determined). Keith Grayson worked for American Airlines in Tulsa. When hired, he signed an employment application which stated that he was an at-will employee and that his employment would be in accord with company rules and regulations. Approximately two years after he was hired, American gave Grayson an employee handbook which included a company rule that no one would be discharged without "good cause." After fifteen years of employment, Grayson was notified that his position would be eliminated due to a reduction in force. Grayson attempted to obtain another job within the company, but American determined that there was not another position available for which he was most qualified. American terminated Grayson and paid him 32 weeks' severance pay. Grayson attempted to obtain another job within the company, but American determined that there was not another position available for which he was most qualified. American terminated Grayson and paid him 32 weeks' severance pay.

Grayson filed suit for breach of employment contract, claiming that the company rule which stated that no one would be discharged without good cause limited American's power to terminate. While the district court granted American's motion for summary judgment, on appeal the Tenth Circuit held that a genuine issue of material fact existed as to whether American breached an implied covenant of good faith and remanded the case for trial. The Tenth Circuit in *Grayson* interpreted *Hall* as indicating that good faith is mandated in all contracts, rejecting American's argument that the covenant of good faith and fair dealing is operable only if the employee has been denied previously earned benefits to be paid in the future. The Tenth Circuit viewed *Hall* as a "a clear indication that the Oklahoma courts have recognized an implied covenant of good faith in contractual dealings."[11] According to the *Grayson* court, in Oklahoma, whether or not an employer has good cause to terminate is not dispositive of the issue; the employer must also act in good faith. Although American did show that good cause to terminate Grayson existed, such a finding did not preclude a separate inquiry into whether American breached the covenant of good faith dealing.[12]

Hinson v. Cameron

After the Tenth Circuit remanded *Grayson,* the Oklahoma Supreme Court again addressed wrongful discharge in *Hinson v. Cameron,* 742 P.2d 549 (Okla. 1987), in which it clarified its holding in *Hall.* The two issues addressed by the Court were: (1) Did an at-will employee, dismissed for her failure to perform an assigned duty, have cause to file suit for wrongful discharge from employment? and (2) Did the employee manual alter an at-will relationship between the plaintiff and her employer?

Hinson, a nurse's assistant employed for fifteen years by Comanche County Hospital, was terminated for failure to follow orders. Hinson alleged that the order that precipitated her discharge was never given to her by her supervisor, Patricia Cameron. She alleged that Cameron subsequently altered the assignment sheet and further argued that the employee manual, which constituted a part of her employment contract with the hospital, protected her from discharge without good cause.

In distinguishing Hinson's claim for wrongful discharge from facts in the *Hall* case, the Court stated (742 P.2d 549, 552):

> The appellate court's reversal of summary judgment against Hinson rests on *Hall v. Farmers Ins. Exchange. Hall* came to be perceived as creating a new cause of action in favor of an at-will employee discharged in "bad faith." As we view *Hall*, it stands for the rule that an agent may recover from the principal when the latter has, in bad faith, deprived him of the fruit of his own labor. The relationship between the Hospital and Hinson was that of master and servant, not principal and agent. Hinson is not claiming the Hospital deprived her of any earned income. In short, the facts and the legal relations dealt with in *Hall* are clearly distinguishable from those in the present case.

The Court then summarized the national body of law governing employment-at-will and the exceptions upon which a wrongful discharge claim may be based, discussing why these exceptions did not apply in the *Hinson* case.

(1) Public Policy Exceptions — where employees were dismissed for refusing to participate in an illegal activity, for exposing some wrongdoing by the employer, for exercising a legal right or interest, etc. In measuring Hinson's claim by these public policy exceptions, the Court concluded that she had no actionable tort claim for wrongful discharge. Her termination was not in direct violation of any public policy. Neither the Hospital nor Cameron ordered Hinson to perform an illegal act or denied her an opportunity to exercise her legal rights.

Because Hinson's termination did not violate public policy, the court found no need to rule on this exception. However, the Court adopted a wrongful discharge cause of action based on the public policy exception to employment-at-will. The Court discussed the facts surrounding Hinson's claim as if "Oklahoma would apply the public policy exception and would recognize an action for tortious discharge...."[13]

(2) Implied Covenant of Good Faith and Fair Dealing — in a frequently quoted segment of the *Hinson* decision, the Court stated:

> We hence decline today to impose upon the employer a legal duty not to terminate an at-will employee in bad faith. Assuming there may be an implied covenant of good faith and fair dealing in every at-will employment relation, that covenant does not operate to forbid employment severance except for good causes. The court's adoption of a contrary view would "subject each discharge to judicial incursions into the amorphous concept of bad faith."

(3) Implied Contract — under the implied contract restrictions of the freedom to discharge an at-will employee, courts have found certain factors critical to evaluate whether an implied contractual right to job security exists: (a) evidence of some "separate consideration" beyond the employee's services to support the implied term, (b) longevity of employment, (c) employer handbooks and policy manuals, (d) detrimental reliance on oral assurance, pre-employment interviews, company policy and past practices and e) promotions and commendations.

Hinson asserted that the Hospital's employee manual constituted an implied contract because it contained information regarding hospital policies and employee benefits. She argued that her termination was "without cause" because it was not based on any of the grounds for termination listed in the manual. The Court stated that, viewed in the light most favorable to Hinson, the manual lists but examples of some, although not all, grounds for termination. The manual did not contain an exclusive list of all grounds for termination; therefore, it did not create an implied contract limiting the hospital's authority to terminate Hinson.

Grayson v. American Airlines (Again)

Following the *Hinson* decision, the District Court for the Northern District of Oklahoma on remand of *Grayson v. American Airlines* (September 15, 1987) sustained American's motion for summary judgment. The district court distinguished *Grayson* from *Hall* by noting that Grayson was American's employee but Hall was Farmers' agent; also, the court awarded Hall earned benefits whereas Grayson made no claim for earned benefits. Further, even if an implied contract to terminate only for good cause existed, uncontroverted facts showed that American had good cause to terminate Grayson because of a reduction in work force.

Burk v. K-Mart Corp.

In late 1986, federal district Judge Brett (United States District Court, Northern District of Oklahoma) certified six questions regarding wrongful discharge to the Oklahoma Supreme Court in *Burk v. K-Mart Corp.*, 770 P.2d 24 (Okla. 1989). The action involved a terminable-at-will employee who brought an action in contract and tort against her employer for breach of the implied covenant of good faith and fair dealing in her employment contract. Both causes of action were brought in reliance on *Hall.* The employee argued the employer's agents harassed her, prevented her from performing her duties and by so doing constructively discharged her from her job. She further asserted the employer's agent told her he would not recommend her for promotion because of her sex. She sought lost wages, damages for alleged injury to her reputation and punitive damages for breach of the implied covenant. The employer denied the claim and asserted the contract action did not exist because the employee's termination resulted in no violation of the employee's constitutional rights.[14]

In an opinion which came down on February 7, 1989, the Supreme Court of Oklahoma responded to those questions of law. The questions were:

(1) In Oklahoma, is there an implied obligation of good faith and fair dealing in reference to termination in every employment-at-will contract?

(2) Is the implied obligation of good faith mutual between the employer and employee?

(3) Does the breach of such implied obligation, assuming there is one, sound in contract and/or tort?

(4) If the answer to question No. 3 is "contract," what are the recoverable damages for breach of the implied covenant?

(5) If the answer to question No. 3 is "tort," what is the character of defendant's conduct that would permit recovery of punitive damages?

(6) Whether the answer to question No. 3 is tort or contract, or both, what is the extent of the duty, if any, of either party to mitigate damages?

The Court stated:

> We reject the implication of an obligation of good faith and fair dealing in every employment-at-will contract. Because we answer the first question in the negative it is unnecessary for us to address the remaining questions.

After discussing the various statutory exceptions to employment-at-will, as well as the *Hall* and *Hinson* cases, the Court further stated:

> In *Hinson,* this Court explicitly declined to impose upon the employer a legal duty not to terminate an at-will employee in bad faith. *Today we hold there is no implied covenant of good faith and fair dealing that governs the employer's decision to terminate in an employment-at-will contract.* (Emphasis added).

However, the Court then went further to discuss case law in other jurisdictions regarding judicially-created public policy exceptions to the employment-at-will doctrine and stated:

> We thus follow the modern trend and adopt today the public policy exception to the at-will termination rule in a narrow class of cases in which the discharge is contrary to a clear mandate of public policy as articulated by a constitutional, statutory or decisional law. *We recognize this new cause of action in tort.*

And further:

> Accordingly, we believe the circumstances which present an actionable tort claim under Oklahoma law is where an employee is discharged for refusing to act in violation of an established and well-defined public policy or for performing an act consistent with a clear and compelling public policy.[15]

Marian P. Opala, Vice Chief Justice of the Supreme Court of Oklahoma, stated that the above ruling refutes any implied trend of past decisions toward limiting the ability of an employer to discharge a worker without liability. However, it leaves businesses subject to punitive damages for firings "contrary to public standards."

Opala, not part of the majority decision, stated that he disagreed with the majority opinion that workers could pursue a tort action for a firing that violated public standards, stating that this should be just a contract action, where only back pay and reinstatement could be awarded and not punitive damages.[16]

Rosenfeld v. Doctors' General Hosiptal

On June 13, 1989, the Supreme Court of the State of Oklahoma came down with a decision regarding the public policy exceptions to the terminable at-will doctrine protecting the so-called "whistle-blower" who exposes illegal and unethical activity on the part of an employer.[17] The appeal was brought by Dr. Michael D. Rosenfeld, who had been a staff physician at Doctors' General Hopsital. He alleged his dismissal by the hospital and revocation of staff privileges was "unjust dismissal" alleging anti-Semitism and illegal and unethical employer misconduct[18] as contrary to public policy.

The opinion states,

> Today, we are called upon to expressly apply certain public policy grounds for recovery in tort where an at-will employee is discharged in reprisal for opposition to an

> employers' illegal or unethical activities. We have heretofore recognized such public policy exceptions to the terminable at-will doctrine protect the so-called "whistle-blower", a person who exposes wrongdoing on the part of his employer. These exceptions are applicable to actions commenced in the courts of the State of Oklahoma.
>
> Similarly, thirty-five of our sister states have expressly or implicitly recognized that an employee at will possesses a cause of action in tort in cases where the employee at will is terminated for revealing or refusing to participate in employer misconduct. Any other result would condone breach of a duty imposed by law on all emlployers—the duty not to discharge an employee for attempting to correct an illegal or unethical act.

After stating that in *Hinson v. Cameron* it had acknowledged that an at-will employee's discharge had been declared to be actionable on several public policy grounds [(a) refusing to participate in an illegal activity); (b) performing an important public obligation; (c) exercising a legal right or interest; (d) exposing some wrongdoing by the employer; and (e) performing an act that public policy would encourage or, for refusing to do something that public policy would condemn, when the discharge is coupled with a showing of bad faith, malice or retaliation,] but that the appellant in the *Hinson* case was without an actionable tort claim for wrongful discharge, the Court stated,

> Consequently, the present case represents our *first opportunity to expressly apply the previously delineated public policy exceptions to the employment at-will doctrine.* (Emphasis added.)

The Court stated that the doctor had stated a viable cause of action for recovery in tort pursuant to one or more of the recognized public policy considerations and reversed and remanded the case to the trial court for further proceedings.

McGehee v. Florafax International, Inc.

On July 11, 1989, the Supreme Court of Oklahoma, in *McGehee v. Florafax International, Inc.*, 776 P.2d 852 (Okla. 1989), granted certiorari to determine whether its decision in *Burk v. K-Mart Corp.* applied.

Douglas McGehee was hired in February, 1982, to manage the credit department of Florafax International, Inc., which operates a flowers-by-wire service for member florists. He was hired to work for an indefinite term pursuant to an oral employment agreement. He claims that Florafax sent unordered flowers to Florafax members and charged the purchase price to members' accounts. Many florists refused to pay for or return the unsolicited goods. After an audit during the fall of 1982 which revealed over $600,000 in delinquent accounts, Florafax undertook a number of aggressive collection methods. McGehee alleged one scheme required him to file small claims court actions against members on delinquent accounts. Each action was to allege Florafax was owed $999.99, the jurisdictional limit for small claims court, even though many members owed substantially less. McGehee refused to execute the affidavits required to file these lawsuits and claims that he was fired for refusing to commit perjury. Florafax countered that his firing was for poor job performance. At trial, a demurrer to appellant's evidence was sustained, the trial court concluding that an at-will employee could be fired for any reason, including refusing to commit a crime.

The Court of Appeals reversed the trial court's decision and remanded it for a new trial, holding that appellant's employment contract contained "an implicit covenant that the parties will act toward each other in good faith - a covenant which forbids wrongful resort to the termination-at-will clause in an employment agreement."[19]

The Supreme Court of Oklahoma stated in its opinion:

> The notion that there is "an implied obligation of good faith and fair dealing in reference to termination in every employment-at-will contract" was specifically rejected in this Court's recent decision in *Burk*, 770 P.2d at 26. Instead, *Burk* articulated a limited public policy exception to the terminable-at-will employee rule.

and further:

> The *Burk* decision "did not abrogate the long-standing terminable-at-will rule but only limited its application to those situations in which the employee's discharge results from the employer's violation of a clear public policy." 770 P.2d at 28. ...

Stating that the *Burk* decision will be given *retroactive application,* the Court remanded the case to the trial court to determine whether appellant's firing violated an established and well-defined public policy.

Recommendations

In light of the evolving case law, the following are some guidelines for employers to consider to insulate their companies from lawsuits for wrongful discharge:

(1) ***Recruitment - avoid implied promises.*** Exaggerated statements by recruiters or other management personnel about job security or advancement opportunities may form the basis of a contractual relationship.[20] Advertisements, brochures, or other forms of

solicitation of employment should not contain any operative words that would establish a fixed duration of employment. Such solicitation, even absent a written contract, may establish a term of employment that could negate the presumption of at-will employment.[21]

(2) ***Interviewing.*** Interviewers should be explicitly instructed not to make promises or representations implying that employment is other than at-will. Phrases intended to entice the prospective employee into accepting a position, such as "employment security," "lifelong relationship" with the company, "permanent" hiring, can come back to haunt the employer.

(3) ***Applications.*** One of the employer's first opportunities to dispel any notions that employment is other than at-will is the employment application. Periodic review of the hiring and interview process should include inspection of employment applications. All ambiguous or misleading language, including statements about job "security" or "permanent" employments, should be deleted. A useful disclaimer, which can be set forth separately from the body of the application directly below the employee's signature line, in bold-face type, is:

> I understand that this employment application and any other company documents are not contracts of employment, and that any individual who is hired may voluntarily leave employment upon proper notice, and may be terminated by the employer at any time and for any reason. I understand that any oral or written statements to the contrary are hereby expressly disavowed and should not be relied upon by any prospective or existing employee.[22]

Large companies with operations all over the United States who cannot tailor their policies to specifically conform with every state's laws are trying to avoid problems by eliminating any promise of job security from employee handbooks. Sears, Roebuck & Co. has applicants sign a form declaring that their jobs can be terminated at any time "with or without just cause." The form has helped Sears win court cases.[23]

(4) ***Handbooks-Manuals.*** Materials designed to familiarize employees with company policies have proven to be fruitful sources of evidence in litigation by dismissed employees. In some cases, employers have chosen to eliminate employee handbooks entirely, rather than providing ammunition in a cause for litigation.[24] An employer should delete all references to dismissal only for "just cause," along with vague terms- like "fair" and "equitable"—that may stimulate litigation. There is no legal bar to giving employees a list of reasons for which they may be discharged. But the handbook should also state that the list is intended only as a guideline and the employer reserves the right to discharge an employee for other reasons. (This was an issue in the *Hinson v. Cameron* case.)

The handbook should state, in bold print, that it is not a contract and that the employer reserves the right to modify or amend any personnel policy at any time, even without notice. It should also state that only designated company officials can enter into an oral or written contract with an employee. This statement will help prevent a later judicial finding that the terms of the handbook were modified by the statements of supervisors. The handbook should also state that, in the event of inconsistency between a statement in the handbook and actual practice, the handbook will govern.[25]

(5) ***Personal Policy and Supervisory Manuals.*** An employer's failure to comply with its own personnel policies or supervisory guidelines can have a negative impact against the company (even though such manuals are not meant for nonsupervisory personnel, they are discoverable by the employee in litigation). This is especially true in the case of an employer's noncompliance with discharge procedures that require notice to the employee or a series of progressive steps before termination.

(6) ***Revise Job Descriptions.*** A detailed job description should state that the employer is free to deviate from that description at any time, with or without notice. Otherwise, fired workers may be able to argue that they were "constructively discharged" for refusing to perform work for which they were not hired.

(7) ***Employee Evaluations.*** Employers should provide both training and written instructions for those supervisors who conduct employee evaluations. A uniform evaluation form with clearly worded objective performance criteria and a wide range of numerical ratings connoting "poor" to "superior" performance should be used. Employees should be required to read their evaluations and sign an acknowledgment that they have done so, whether or not they agree with its contents. Employers should monitor the ratings given by various supervisors and departments to detect evaluations that are either abberrant or unusually uniform.

(8) ***Discipline.***Provide disipline training seminars to all managers and supervisors. All it takes is one maverick supervisor to plunge an employer into a legal battle.[26]

(9) ***Document Unsatisfactory Performance.*** Supervisors should be instructed to document every incidence of unsatisfactory performance. In fact, the employee should be asked to sign the record. A refusal to sign should be noted on the report of the incident. Their termination of a long-term employee should be handled with particular care. Such employment naturally gives rise to a feeling of security and an expectation of continued employment. If, however, the employer can show documentation of the employee's continually unsatisfactory performance, the employer is in a better position to support his claim that the discharge was reasonable. It may help to provide a supervisor with a standardized form to assist in this record keeping.[27]

Most wrongful discharge litigation in Oklahoma alleges violation of public policy, especially age, race or sex discrimination, dismissal for refusing to commit an illegal act, dismissal for being a "whistleblower," and termination in retaliation for filing a workers' compensation claim. We all like to think that we would not be working for an employer subject to liability for firing someone for refusing to commit an illegal act or for being a whistleblower— but any employer, at any time, can easily be the target of a suit alleging dismissal because of age, race, or sex discrimination, even though the allegation may be completely false. And in Oklahoma, this is where the real danger for employers lies, with the new tort cause of action allowing for punitive damages in cases where public policy has been violated. If the employer can go to court armed with documentation of the employee's continual poor performance, he has a much better chance of convincing the jury that the dismissal was because of the employee's performance rather than on the grounds in violation of public policy alleged by the employee.

(10) ***Procedure for Termination.*** The employer should have an internal procedure for job termination. Lower level management personnel should not have authority to discharge employees without first obtaining consent from the personnel department or higher management.

Employers should carefully consider terminations which are proximate in time to an on-the-job injury, after an employee's recovery of benefits, or any employee conduct concerning workers' compensation. 85 O.S. § 5 (1981). Retaliatory discharge suits are very popular, probably because of the difficulty of defense. A termination close on the heels of a workers' compensation claim creates a strong suspicion that the employee's termination was illegal retaliation. To prevail, an employer must be able to produce convincing testimony and documentation to support his reason(s) for discharge. Further, the terminated plaintiff is often able to generate considerable jury sympathy. It should be remembered that the employer's actions will be reviewed by twelve jurors who are more apt to be the employee's peers than the employer's.[28]

(11) ***Post-discharge Procedures.*** If the discharge is not based on the employee's performance, offering outplacement services, at the employer's expense, may serve to direct the employee's attention toward prospects of new employment—and could mitigate claims of bad faith.

There should be an exit interview in which each employee—terminated or resigned—is encouraged to air grievance. This procedure can help uncover problems that might lead to legal action by a fired employee. The employer should act with caution if a fired employee asks for a recommendation or reference. If the employee was discharged for cause, a positive reference could be used as evidence in a wrongful discharge suit.

Of course, following the above recommendations will not completely protect the employer from an employment-at-will lawsuit. Lawrence Z. Lorber states:

> Careful understanding of employment-at-will and appropriate responses to current legal developments can buttress an employer's position. However, very little can be done to completely insulate employers from lawsuits. Anyone with a grievance, a typewriter and a lawyer can file a lawsuit. None of these are in short supply in the United States.[29]

Certainly, the effort to protect the employment at will "right" has not provided the intended results; recent judgments and impending legislation render any further application of time, energy, and money in this pursuit to have moot purpose. Often, the at-will argument has been used as an inappropriate backdrop for a poorly-executed discharge, even when the discharge itself was justified.[30]

Arbitration/Just Cause Legislation

Many management lawyers say that no amount of legal armor can completely protect employers, arguing that dispute-resolution systems such as arbitration are a better way to foil lawsuits. The idea can be found in almost every union grievance procedure, but now more and more companies are using it for nonunion workers (BankAmerica, NBC, Aetna Life Insurance, Federal Express Corp. and Northrop Corp. are but a few).[31]

Bills forbidding wrongful discharge have been introduced in a dozen or more state legislatures. Thus far, however, only Montana has an employment-at-will law, which went into effect in 1987. Montana juries had given huge damages to dismissed employees. To put a stop to such verdicts, employers endorsed a law that caps their liability at four years of back wages. It also prohibits firings without "just cause" for workers who have completed a probationary period. The law, which is too new to have much of a track record, allows arbitration but lets suits proceed if arbitration is rejected.[32]

Theodore J. St. Antoine of the University of Michigan Law School, notes that the United States is the last major industrial democracy in the world without "just cause" protection for workers. Statutory protection against unfair discharge now exists in about sixty countries around the world, including all of the Common Market, Sweden and Norway, Japan, and Canada. The United States is the last major holdout against the recommendations of the International Labor Organization in 1963 and again in 1982 that workers not be terminated except for a valid reason.[33]

Samuel Estreicher of New York University states that experience in European countries indicates that employers generally make only modest payments to illegally fired people. In Britain, for example, employees are seldom reinstated to their jobs; instead, they receive a monetary award, which in 1978 amounted to only five weeks' pay for the average wage earner. The widespread acceptance of these laws by employers, he states, "may well be attributed to their ability to insure themselves without excessive costs." In the U.S., employers decades ago similarly escaped huge damage awards for job-related injuries by supporting passage of state workers' compensation laws.[34]

Marian P. Opala, vice chief justice of the Oklahoma Supreme Court, currently is part of a 12-member committee for the National Conference of Commissioners on Uniform State Laws that is drawing up a proposed statute, which would be adopted state by state, to establish an arbitration system for the handling of claims arising from firings that are not for "good cause." Good cause would mean for "sound business reasons," states Opala.[35]

The arbitration system would apply to workers on the job for more than a year. A worker could receive reinstatement with back pay and attorney fees. For a firing that flagrantly violates good cause, a worker could pursue punitive damages. This system was proposed in a bill filed in the 1989 session of the Oklahoma Legislature, House Bill 1174, but it was held back in favor of interim study on the subject.[36]

Conclusion

In summary, employment-at-will is alive and well in Oklahoma, with certain exceptions. In *Hinson v. Cameron* (1987), the Oklahoma Supreme Court stated that it expressly declined to find an implied covenant of good faith and fair dealing in every employment contract. It also declined to find in the employee manual an implied contract limiting the hospital's right to terminate.

Then in *Burk v. K-Mart* (February, 1989) the Oklahoma Supreme Court directly addressed the question left open in *Hinson:* whether in Oklahoma, there is an implied obligation of good faith and fair dealing in reference to termination in every employment-at-will contract. It concluded that in Oklahoma, with the exception of a very narrow class of cases where discharge is contrary to a clear mandate of public policy, "there is no *implied obligation* of good faith and fair dealing in reference to termination in any employment-at-will contract." (Emphasis added.)[37]

The exceptions to the employment-at-will doctrine in Oklahoma are:

(1) Statutory exceptions - (Oklahoma Civil Rights Act, retaliation for filing worker's compensation claim, jury duty, etc. - fully outlined on pages 4-5 herein).

(2) Other public policy exceptions evolving through case law:
  (a) *Hall v. Farmers Ins. Exch.* (1985) (termination to avoid paying earned commissions to insurance agent);
  (b) *Rosenfeld v. Doctors' General Hospital* (termination of "whistleblower") - this case for the first time (June 13, 1989) *expressly applied* the previously delineated public policy exceptions to the employment-at-will doctrine.

Other recent important developments in employment-at-will in Oklahoma are:

Since February 7, 1989 *(Burk v. K-Mart)*, the Oklahoma Supreme Court has recognized a *new cause of action in tort* in the narrow class of cases in which the discharge is contrary to public policy—leaving businesses subject to punitive damages for firings contrary to public policy.

And on July 11, 1989 (*McGehee v. Florafax)*, the Oklahoma Supreme Court ruled that the *Burk* decision will be given *retroactive application*.

The issue of just cause legislation is receiving much national attention. Even the AFL-CIO's Executive Council has ended organized labor's longstanding ambivalence on the subject by endorsing the concept of wrongful discharge legislation. With jury awards (in other jurisdictions) averaging between $425,000 and $450,000, single awards having gone as high as $20 million, $4.7 million, $3.25 million, and $2.57 million, an informed employer lobby might well conclude that comprehensive just cause legislation, which would exclude jury verdicts and punitive damages, was the more favorable alternative.[38]

One might speculate that a bill proposing the arbitration system described by Justice Opala would be introduced in the 1990 session of the Oklahoma Legislature—and, if it were passed, drastically affect the status of employment-at-will in Oklahoma. However, in a telephone interview on November 29, 1989, Justice Opala stated that he doesn't feel that the bill will pass in the next session of the Legislature, but that he will continue to push for its passage.

With the current status of employment-at-will in Oklahoma, most employers are not greatly at risk for large punitive damage verdicts unless they are involved in actions contrary to public policy. Therefore, such legislation would not have the support of employers in this State, and would be vehemently opposed by those powers-that-be who are trying to bring industry into Oklahoma.

It is our opinion, after talking with these experts, that unless further erosion of employment-at-will in Oklahoma occurs through court decisions, resulting in huge punitive damage awards as have occurred in other jurisdictions, that the wrongful discharge/arbitration bill proposed by Justice Opala will not pass in Oklahoma. However, if Oklahoma case law eventually moves in the direction that it has in some other states, such as California and Montana, we may in the future see the passage of such legislation and a drastic change in employment-at-will in Oklahoma.

Notes

[1] *Payne v. Western and A.R.R.Co.*, 81 Tenn. 507 (1884).

[2] M. Ronald Buckley and William Weitzel, "Employing at will," *Personnel Administrator*, August, 1988.

[3] William E. Fulmer and Ann W. Casey, "Employment at will: Options for managers," *Academy of Management Executive*, 1990, 4(2): 102-107.

[4] *Cleary v. American Airlines, Inc.*, 111 Cal.App.3d 443, 455 168 Cal. Rptr. 722, 729 (1980).

[5] *Gates v. Life of Mont. Ins. Co.*, 638 P.2d 1063, 1067 (Mont. 1982).

[6] Tim Chavez, "Courts Redefining 'Employment at Will,' Justice Says," *The Sunday Oklahoman*, March 19, 1989.

[7] Donald R. Aubry, "Employers and Employees: A Call for Oklahoma's Adoption of the Whistle-Blower Exception to the Employment-at-Will Doctrine," 40 Okla.L.Rev. 285 (1987).

[8] *Hall v. Farmers Insurance Exchange*, 713 P.2d 1027 (Okla. 1986), quoting *Wright v. Fidelity & Deposit Co. of Maryland*, 1786 Okla. 274, 54 P.2d 1084, 1087 (1936).

[9] Harry F. Tepker, Jr., "Oklahoma's At-Will Rule: Heeding the Warnings of America's Evolving Employment Law?," 39 Okla.L.Rev. 373 (1986).

[10] Id.

[11] *Grayson v. American Airlines*, 803 F.2d 1097, at 1099.

[12] Id

[13] *Hinson v. Cameron*, 742 P.2d 549, at 557.

[14] *Burk v. K-Mart Corp.*, 770 P.2d 24, at 24.

[15] Id.

[16] Tim Chavez, "Courts redefining 'Employment at Will,' Justice Says," *The Sunday Oklahoman*, March 19, 1989.

[17] *Rosenfeld v. Doctors' General Hospital*, ———P.2d ———, 60 OBJ 1507, (Okla. 1989).

[18] Dr. Rosenfeld alleged the dismissal was the result of his discovery and reporting of certain illegal and unethical activities occurring in the hospital, including (1) incompetent physicians and doctors operating and treating patients, (2) incompetent staff causing the death or further incapacity and disability to patients, (3) false billings to patients' insurance companies, patients and medicare/medicaid, and (4) falsification of medical records to "cover" omissions and malfeasance, e.g., removing a respirator from a patient who was not dead; omitting to see a ward patient for 6 days from the day of admittance and not a single chart entry made; chemistries ordered but not done on a patient; life saving procedures ordered upon patient's renal failure, but omitted, and subsequent death of the patient; blood ordered for shock patient but water given -patient sustained permanent irreversible damage because of being in shock for 36 hours prior to administration of the ordered blood; diagnosis changed on patient's chart subsequent to demise; medicine in "pill" form given to comatose patient; and intravenous solution running into mattress instead of patient's arm.

[19] *McGehee v. Florafax International, Inc.*, 58 OBJ 2610 (1987) (Oklahoma Court of Appeals).

[20] Stephen A. Ploscowe and Marvin M. Goldstein, "Trouble on the Firing Line," *Nation's Business*, March, 1987.

[21] Lawrence Z. Lorber, "Basic Advice on Avoiding Employment-at-Will Troubles," *Personnel Administrator*, January, 1984.

[22] Lawrence Z. Lorber, "Basic Advice on Avoiding Employment-at-Will Troubles," *Personnel Administrator*, January, 1984.

[23] William B. Glaberson, "Rolling Back the Boss's Right to Fire at Will," *Business Week*, July 8, 1985.

[24] See footnote 3.

[25] Stephen A. Ploscowe and Marvin M. Goldstein, "Trouble on the Firing Line," *Nation's Business*, March, 1987.

[26] Lynne Curry, "Know Your Rights When Firing an Employee," *Administrative Management*, May, 1987.

[27] Id.

[28] Peter T. Van Dyke and Gary C. Pierson, "Labor Relations: Recent Developments in Employment/Liability at Will," 57 OBJ 1283 (1986).

[29] Lawrence Z. Lorber, "Basic Advice on Avoiding Employment-at-Will Troubles," *Personnel Administrator*, January, 1984.

[30] See footnote 3.

[31] Aaron Bernstein, "More Dismissed Workers Are Telling It to the Judge," *Business Week*, October 17, 1988.

[32] John Hoerr, "It's Getting Harder to Pass Out Pink Slips," *Business Week*, March 28, 1988.

[33] Theodore J. St. Antoine, "At-Will Employment and the Handsome American: A Case Study in Law and Social Psychology," (November, 1987).

[34] John Hoerr, "Beyond Unions," *Business Week*, July 8, 1985.

[35] Tim Chavez, "Fired Employees Gaining Recourse," *The Sunday Oklahoman*, March 19, 1989.

[36] Id.

[37] *Burk v. K-mart Corp.*, as cited in *Wiliams v. Maremont Corp.*, 875 F.2d 1476, 1479 (10th Cir. 1989), an interesting case in which a verdict for $750,000 actual damages and $250,000 punitive damages awarded by a jury in 1984 to a supervisor at Maremont Corp. in Chickasha for wrongful termination was overturned by the Tenth Circuit on May 23, 1989. The supervisor had been terminated for sexual harassment of female subordinates. (During the pendency of the case on appeal, the *Hinson* and *Burk* decisions had been decided by the Oklahoma Supreme Court.) The Tenth Circuit stated, "Upon consideration of the record in the light of new guidance from the Oklahoma Supreme Court, we reverse." and ". . . the question is not whether Maremont was unduly harsh in this instance [as the jury obviously thought it was], the question is whether it had the legal right to terminate Williams under the circumstances. We conclude that it did."

[38] Theodore J. St. Antoine, "At-Will Employment and the Handsome American: A Case Study in Law and Social Psychology."

M. Ronald Buckley is an Associate Professor of Management at the University of Oklahoma. Candice Cox is currently pursuing her B.S. in Business Administration from the University of Oklahoma. Bernard Patrick Maroney and Peter C. Johnson are doctoral students in Management at the University of Oklahoma.

Ranking Oklahoma's Taxes

JOSEPH T. JOHNSON

WHERE DOES OKLAHOMA RANK among all the states in the level of taxation? The answer to this question can influence the outcome of a whole range of important decisions, from voting on new taxes for education to choosing a location for a company facility. Yet the answer is not easy to come by. *Money* magazine says Oklahoma has the nation's thirteenth *highest* state and local tax burden, but the Advisory Commission on Intergovernmental Relations says it has the eleventh *lowest*. The Kerr-McGee Corporation says Oklahoma's taxes are higher than Texas', while the Southwest Policy Institute's ranking of states' taxes would put Oklahoma lower than Texas.

One reason these ranking schemes diverge is that size of the tax burden really depends on precisely which taxes are measured: actual collections by the state or theoretical tax bills of average taxpayers, just selected taxes or all state and local levies. Should these amounts be compared to income or to the tax base or to some other measure of state and local revenue sources? These and other tax definitions can decisively affect Oklahoma's ranking.

Yet even after the taxes have been defined, there will remain an area of ambiguity, because there is no universal agreement on how to allocate tax incidence. For instance, much of the sales tax revenue in Hawaii is not raised from Hawaiians. Millions of tourists spending millions of dollars in Hawaii contribute a large proportion of that state's sales tax collections. In Oklahoma, the severance taxes on oil and natural gas, although collected by the state, are paid largely by the actual consumers, who reside mainly in other states. Inclusion of the full amount of Oklahoma's severance tax collections could overstate the state's tax burden .

Income tax rates can be extremely difficult to compare among states. Since some states tax earned income at one rate and unearned income at another rate, individual income taxes have to be somehow adjusted before making interstate comparisons. It's at least as difficult to compare corporate income tax burdens. Many firms do business in more than one state. Yet states differ in how they calculate the percentage of a corporation's income that has been earned in their states. It's therefore possible that high corporate income tax revenue in state A is actually being collected on income earned in state B, thereby overstating the corporate tax burden in state A.

Interstate comparisons of sales and other excise taxes can also be very complicated. For one thing, no two states will levy their excises on exactly the same list of items. One state may exclude groceries but include personal services, while another may tax groceries but not personal services. For another thing, it is not always clear who bears the burden of an excise tax, the seller of the taxed good or the buyer. Economists explain that the distribution of a tax's burden depends on the relative sensitivity of buyers and sellers to price changes of the good. Roughly speaking, if the sellers are relatively more sensitive to price changes, then the buyer will tend to bear the major burden of the tax. Now, if the buyer happens to be from out of state, then the tax, though nominally "in the state" may be part of the tax burden of the state where the buyer resides.

Perhaps the most vexing problem of all in interstate tax comparisons is the enormous impracticality of maintaining comprehensive, up-to-date rankings. As soon as Oklahoma changes its tax system, so do numerous other states. In fact, even when Oklahoma does nothing to alter its taxes, it's a near certainty that other states are changing and therefore potentially affecting Oklahoma's rank. This wouldn't be so troublesome if all the necessary information were instantly and continually available. Unfortunately, gathering all the facts to make a responsible comparison among all the states can take two years or longer. This means the most credible tax rankings tend to be published long after they have ceased to be totally up-to-date.

Then there is the irony that, even when all the standards have been clarified and agreed upon, the resulting rankings may give an exaggerated impression of differences among states. This is because the difference between, say, 25th place and 30th place may amount to only a 0.7 percent difference in the tax burdens of the two states. It can be rather like the actual time differences among gold, silver, and bronze medallists in Olympic sprints: mere fractions of a second decide the order of precedence.

What all these complications signify is that it is possible to have more than one meaningful list of rankings of the states' tax burdens. Two reasonable people can arrive at different, though equally legitimate, ways to rank Oklahoma. It may be that Oklahomans cannot settle on any single all-purpose ranking of tax burdens. Nevertheless, they can at least take note of the standards by which each ranking is compiled in order to understand some of the factual bases of their disagreements.

This paper tries to explain the criteria of seven of the best-known rankings of Oklahoma, namely, those by the Advisory Commission on Intergovernmental Relations, the Southwest Policy Institute, the U.S. Bureau of the Census, the Tax Foundation, the Citizens for Tax Justice, the District of Columbia Department of Finance and Revenue, the Kerr-McGee Corporation, and *Money* magazine. Each of these organizations has published a standardized measure of state or local taxation and ranked each state's measure by its size relative to the other states'. Table 1 shows these measures and their respective rankings.

Advisory Commission on Intergovernmental Relations Southwest Policy Institute

Both the Advisory Commission on Intergovernmental Relations (ACIR) and the Southwest Policy Institute (SPI) rank state tax burdens by comparing actual tax collections with the state's ability to raise taxes. This requires using the same tax bases in each state in order to ensure comparability among states. This standardized list of items that are potentially taxable may include broad categories like income, property, and general sales transactions, as well as narrow categories like sales of alcoholic beverages or automobile licenses.

Advisory Commission on Intergovernmental Relations

The ACIR measures what it calls tax effort divided by tax capacity. Roughly speaking, this means total taxes collected by the state divided by the total value of the tax base. The key to ACIR methodology is establishing a common tax base and national average tax rate so that all states can be compared by exactly the same criteria.

The denominator of the ACIR ratio, tax capacity, is derived by applying national average tax rates to each of a "representative" set of tax bases in the state. (A base is the item being taxed, such as property or income.) Since, as we've already seen, different states collect taxes on different bases, the ACIR develops a standardized or "representative" set and derives its taxation measure assuming this set represents the potential tax bases for any state. This measure of tax capacity is computed with the same tax rate, i.e., the national average, for each state; so states will differ in size of capacity according to size of their respective bases. For instance, Texas will have a larger total tax base, i.e., its representative set of bases will have a larger value than Oklahoma's set of bases. Texas will therefore have a larger tax capacity, which is the denominator of ACIR's ratio for the state. In defining and evaluating a state's tax base, ACIR undertakes to include the ability to tax nonresidents, e.g., tourists with sales taxes or natural gas consumers with severance taxes.

The numerator of the ACIR ratio is simply the total amount of tax revenue collected by the state and local governments. Since the denominator of the ACIR ratio accounts for the capacity to tax nonresidents, the numerator includes exported taxes collected from such sources as tourists, consumers of natural gas paying a severance tax, and so forth.

Southwest Policy Institute

The Southwest Policy Institute publication, "Let's Stop Blaming the Oil Boom," does not explicitly rank the states' tax burdens but, rather, assigns Oklahoma to the highest eight percent of all states (i.e., top four) in size of tax burden growth. This implicit ranking measure derives from the ACIR Tax Effort ratio but concentrates on how the ratio changes over a five-year period. Actually, the Southwest Policy Institute relies upon the *Grant Thornton Manufacturing Climates Study* for the ACIR data and change calculations.

The numerator of the Southwest Policy-Grant Thornton ratio is the change in the ACIR Tax Effort over the last five years. Tax Effort is itself a ratio, namely, of tax collections to tax capacity; so the Southwest Policy numerator is the five-year change in a ratio. The Southwest Policy denominator is simply the tax effort for the base year, i.e., from five years earlier than the year being measured.

TABLE 1
State Tax Burdens as Measured and Ranked by Various Organizations

	Numerator	Denominator	Oklahoma Rank	Texas Rank	Year of Report	Year of Data	Difference in Oklahoma & Texas Burdens
Advisory Commission on Intergovernmental Relations	Tax Revenues of state and local governments	Potential tax bases of state multiplied by national average rates	40	42	1990	1988	1.1%
Southwest Policy Institute	Change in tax burden (ACIR) in last 5 years	Tax burden 5 years ago	4	2	1989	1986	-26.2%
Census Bureau	Tax revenues of state and local governments	Personal income of state residents (divided by 1,000)	27	33	1990	1987-88	2.3%
	Tax revenues of state government	Personal income of state residents (divided by 1,000)	20	47	1990	1989	25.8%
Tax Foundation	Tax revenues of state projected from Federal Budget (precise method not revealed)	Income of state abstracted from projected GNP	7	46	1990	Sources Not Revealed	22.0%
Citizens for Tax Justice	Average sales & excise tax rate (state & local) multiplied by expected income, property, purchases of averagefamily	Income of average family in seven income brackets in each state	6	9	1988	1981-86 (middle income bracket)	6.7%
District of Columbia	Income, sales, property, auto tax rates (state & local) multiplied by expected income, property, purchases of average family	Income of average family in four income brackets in state's largest city	39 (OKC)	45 (Houston)	1989	1988 ($50,000 bracket)	20.9%
Kerr-McGee Corp	Income, sales, property tax rates (state & local) multiplied by expected income, property, purchases of average family	Income of average family in four income brackets (only 14 states ranked)	7 (out of 14)	12	1990	1989 ($50,000 Bracket)	24.2%
Money Magazine	Income, sales, gasoline tax rates (state) multiplied by expected income and purchases of average family.	$61,372 income of average family of *Money* readers	13	48	1990	1988	93.1%

Unlike ACIR, Grant Thornton does not consider severance taxes on natural resources to be part of a representative or national average tax base. Therefore, it deducts severance taxes from both the ACIR numerator (collections) and the ACIR denominator (representative tax base). This means the implicit Southwest Policy ranking of changes in state tax burdens does not include state severance taxes.

Further Explanations

The ACIR tax burden ratio, which it calls Tax Effort, can be sensitive to tax politics and legislation in the states. This is because it computes the denominator, the state's theoretical fiscal capacity, by relying on national average tax rates. It pegs every state's ability to raise taxes to a single national rate for each tax base. That national rate is derived by averaging the prevailing rates in all the states levying such a tax. If these states vote to raise or lower their rates, the national average and the fiscal capacity measure will rise or fall accordingly. In this sense, the ACIR ratio imples that a state's potential to tax itself can change due to developments entirely external to the state.

The ACIR also computes a ratio called Revenue Effort. In addition to all the tax bases and collections in Tax Effort, Revenue Effort includes some non-tax sources of revenue: user charges for government facilities (e.g., state park fees), state lotteries, and rents and royalties from government mineral resources not already covered by severance taxes.

It may be of interest to note that the ACIR methodology does not incorporate the concept of progressivity in taxation, i.e., levying a higher rate on larger tax bases. Unlike the Federal income tax, the rates of which rise as the individual's income rises, the ACIR's measure of fiscal capacity applies the same to rate every state regardless of the size of its tax base.

The SPI-Grant Thornton ranking of changes in tax burden can be sensitive to differences among, say, oil and gas states in their respective severance tax rates. Suppose two states have the same natural resource tax base, e.g., equally-valued natural gas deposits, but that one actually taxes its base much more than does the other. Deduction by Southwest Policy-Grant Thornton of severance taxes makes the lower-taxing state's burden go up relative to the higher-taxing state. It reduces capacity, the denominator of the tax burden ratio, equally in both states but reduces collections, the numerator, less in the low-severance-tax state. This causes tax collections in the low-severance-tax state to appear much larger in relation to the reduced capacity. This in turn cause the computed tax burden to become larger in the low-severance-tax state and may be enough to alter its ranking with respect to the high-severance-tax state. Severance taxes are considered some of the most exportable to nonresidents. The Southwest Policy ranking thus assigns a higher ranking to states that don't export as much of their taxes as they could, i.e., that don't tax as much of their oil or gas or timber production as they could.

U.S. Bureau of the Census Tax Foundation

Both the Census Bureau and the Tax Foundation rank state tax burdens by comparing state and local collections to a measure of state income. The Census rankings are also published, in a different format, by Commerce Clearing House, Inc.

U.S. Bureau of the Census

The Census Bureau, in its annual *Government Finances*, uses actual tax collections and actual state income in order to compute a tax burden ratio. The collection data on fiscal year 1987-1988 are derived from the Federal Budget for 1990. The income data are based on U.S. Department of Commerce calculations for the national income and product accounts.

The numerator of the Census tax burden ratio is each state's tax collections, including revenues from both state and local levies on income, property, sales, alcoholic beverages, public utilities, and other sources. The denominator of the Census ratio is state personal income divided by 1,000. Thus the ratio gives the amount of taxes per $1,000 of personal income earned by the residents of each state.

In its annual *State Government Tax Collections*, the Census Bureau also ranks states by amount of state taxes per $1,000 personal income. That is, the numerator of this tax burden ratio consists of state, but not local, tax collections. The denominator is the same as in the *Government Finances* ratio, namely, the income earned by the state's residents.

Tax Foundation

The Tax Foundation uses a ranking methodology that is roughly similar to the Census Bureau's, although it arrives at a noticeably different set of state rankings. For each state, it divides a measure of state and local tax revenues by a measure of total state income. This ratio, the state's taxes as a proportion of income, is compared to all other state's ratios and given a rank.

The denominator of the Tax Foundation ratio consists of the projected gross state product in 1990. This projection is based on the predictions about Gross National Product set forth in the Federal Budget for 1990-91. Portions of the predicted GNP are then allocated to each state according to some formula in order to arrive at projected state product, which is then taken as the measure of state income.

The numerator of the Tax Foundation ratio is some measure of projected tax collections for the state. The precise formula has not been made available by Tax Foundation researchers, so it is difficult to say how their tax burden ratio compares with others.

Further Explanations

The Census Bureau's use of state tax collections in the numerator can make the tax burden appear lower than is justified. Some of the state's income may well have accrued to residents who worked, owned property, or did business in another state and were therefore taxed in another state instead of in their own. In this case, the tax collection numerator would be smaller than the actual tax bill paid by the state's residents and businesses. The ratio could turn out to be smaller and the ranking lower than justified by the actual tax burden borne by the state's taxpayers. Of course, by the same token, the numerator would be larger than the actual burden borne by residents if some of the collections came from taxing nonresidents.

Using personal income as a denominator in a tax burden ratio can overstate the burden. Income earned by residents is supposed to reflect the state's ability to pay state and local taxes. Yet the income in the denominator does not reflect the incomes of nonresidents who are taxed by state and local governments. Individuals from out of state may be taxed for working, making purchases, or owning property in the state. Since the denominator of the Census ratio includes only the income of state residents, it may be smaller than the state's actual ability to pay. The result can be a larger than appropriate tax burden ratio and perhaps a higher than justified ranking of the state's tax burden.

Unlike the Census Bureau measurement, the Tax Foundation's ratio appears to include business income in the denominator. It also purports to avoid the ambiguities of nonresident taxes by adjusting both tax collections and state income for exporting and nonresident income, respectively. Although it hasn't revealed its exact methodology, the Tax Foundation claims to attribute taxes by establishing whence the taxes are paid, not the state where they are collected. Without documentation, though, the Tax Foundation's ranking scheme should not be considered a proper measure of states' taxes.

Citizens for Tax Justice
District of Columbia
Kerr-McGee Corporation
Money Magazine

The Citizens for Tax Justice (CTJ), the District of Columbia (DC), the Kerr-McGee Corporation and *Money* magazine all rank states' tax burdens by computing the taxes that hypothetically would be owed by some standard or average family if that family's income were taxed in each of the fifty states and the District of Columbia. Beyond that, the ranking systems differ widely in their definitions of taxes and taxpayers.

Citizen for Tax Justice

A 1988 tax study by Citizens for Tax Justice (CTJ), *Nickels and Dimes,* deals only with the sales tax, including general sales, excise, and gross receipts taxes. Consequently, its rankings do not purport to characterize the entire tax burden in a state. The CTJ model does include both state and local taxes by calculating an average local rate and adding it to the state sales tax rate. The study establishes seven categories or quantiles of household income and then computes how much a family of four from each quantile would pay in sales tax in each of the fifty states and the District of Columbia.

The denominator of the CTJ ratio can be average income in one of seven family income classes. There is an income class for the 20 percent of the families with the lowest incomes in the state, a class for the 20 percent of families with the next-to-lowest incomes, and so forth on up to a class for the 0.7 percent of families with the highest incomes in the state. The exact dollar limits of each class vary from state to state according to how the ranges of household income vary from the richer to the poorer states. For instance, the average family income in New Jersey's middle income category is $57,770. In Oklahoma it is $36,517.

The CTJ numerator can be one of seven tax bills, depending on which income category the average family of four is assigned. The state's sales taxes are applied to the average family's income as if it made "average" purchases for its income class. That is, for each income category, the family of four is assumed to spend on various items (food, transportation, utilities) in the same proportions as reflected in the U.S. Bureau of Labor Statistics' *Consumer Expenditure Survey.*

District of Columbia

In its annual study, *Tax Rates and Tax Burdens in the District of Columbia: A Nationwide Comparison,* the District of Columbia compares itself as a city with other cities in the nation. Specifically, it compares its individual tax burdens with those of the largest city in each of the fifty states. The DC ranking of Oklahoma is therefore a ranking of Oklahoma City among all other states' largest cities (not the metropolitan areas), e.g., Casper, Wyoming; Houston, Texas; and Newark, New Jersey.

The numerator of the DC tax burden ratio is the taxes paid by a hypothetically average family in one of four income categories. The family in each category is assumed to consist of two working spouses and two dependent children. The study addresses income, propety, sales, and automobile taxes. To compute income and property taxes, the study assumes one spouse makes 70 percent of the income while the other makes 30 percent and that each family owns its home in the state's largest city. Other assumptions are made about what an average family would spend in order to compute sales and automobile taxes.

The denominator of the DC ratio can be one of four family income levels: $25,000, $50,000, $75,000, and $100,000 per year. Thus the DC ranking scheme computes four tax burden ratios for each state's largest city and for the District of Columbia itself. It's possible for a city to have different rankings, depending on which ratio is used.

Kerr-McGee Corporation

In February, 1990, Kerr-McGee published a comparison of Oklahoma's tax burden with those of thirteen alternative states: Arizona, Arkansas, California, Colorado, Georgia, Kansas, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, New Mexico, Oklahoma, Texas. The study computed the tax burdens of four hypothetical households as if they resided in Oklahoma and as if they resided in each of the thirteen other states.

The numerator of the Kerr-McGee tax burden ratio consists of the hypothetical collections of three kinds of taxes: income, sales, and property. The four households are all assumed to consist of two married people with two dependents who spend 25 percent of their gross income on taxable goods and services. They are also assumed to own houses whose values differ according to their respective household incomes.

The denominator of the Kerr-McGee ratio can be one of four gross incomes: $30,000, $50,000, $100,000, and $200,000. A separate tax burden ratio is computed for each income category. Rather than compute a numerical ranking, the study has bar graphs that show the states arranged in ascending order according to their tax burden ratios.

Money Magazine

The January, 1990 issue of *Money* magazine also uses the device of an average household to rank states' tax burdens. In this case it's an average reader of *Money* magazine: two earners, two children, $61,372 in income, of which $1,499 is unearned (interest and dividends). Although its computation includes state income taxes along with general sales taxes, it excludes property and other taxes. For most states, the computation excludes any local taxes.

The numerator in *Money's* tax burden ratio is the sum of income and sales taxes. The income levy is found by multiplying the average income of $61,372 by the state's income tax rate for a two-parent, two-child family. The sales levy is derived by multiplying the sales tax rate by the expected expenditures of this average *Money* family: $4,992 on food, $1,034 on clothing, and 940 gallons of gasoline consumed.

The denominator of the *Money* ratio is quite simple: $61,372 regardless of state. The aim is to see how a family of four with this typical *Money* income will be taxed in each of the fifty states.

Further Explanations

None of the ranking systems based on a typical family's income includes the full range of taxes. The Citizens for Tax Justice study is solely concerned with sales taxes. Kerr-McGee's ranking includes only state taxes on income and state and local taxes on sales and property. The District of Columbia ranking accounts for income, property, sales, and auto taxes, but not, for instance, severance or utility taxes. *Money* Magazine's ranking includes just income and sales taxes and generally excludes local taxes of any kind.

It's possible that a change in the profile of the average taxpayer would significantly alter tax burden ratios and even the state rankings in all four studies. This is because all four derive the tax payments of their respective average families from assumptions about how these hypothetical families spend their hypothetical average incomes. In some states, a family of four with an income of $61,372 might have a higher proportion of earned as opposed to unearned income. Then again, the family might spend its income in different proportions or even save more than the hypothetically average family. Other examples could be formulated of circumstances that would cause tax rates to be applied in different proportions than assumed by the studies.

It's also difficult to say to what extent a state's tax burden can be characterized by taxes on the single type of household studied by *Money*. For families in other income or expenditure categories, the state's burden ranking may come out higher, lower, or just the same. The District of Columbia and Kerr-McGee studies address this ambiguity by examining four income categories and assigning expenditures on the basis of those different categories. The Citizens for Tax Justice study examines all of seven categories. In addition, it accounts for differences among rich and poor states by defining income categories on the basis of each particular state's average income.

Using the Rankings

It's useful to note that most of the ranking organizations use hypothetical statistics to compute the tax burden. Only the U.S. Census Bureau relies totally on actual statistics, i.e., historical data on income earned and taxes collected. All the other ranking organizations derive at least a part of their tax burden ratio from hypothetical statistics, e.g., projected income, hypothetical tax base, average (meaning typical) family earnings and expenditures. This does not necessarily diminish the significance of these ratings. On the contrary, it can serve to make them more powerful by enabling more comprehensive comparisons than would be possible with just the plain statistics at hand. As has already been discussed, plain statistics don't account for, among other things, the great variability among states as to which items are taxes and which taxes fall on nonresidents.

It's also useful to consider how aggregating different types of taxes into a single measurement of tax burden can obscure potentially interesting policy issues. There is a substantial body of opinion that judges the fairness of a tax by its progressivity, that is, by the degree to which a tax rate goes up as the taxpayer's ability to pay goes up. Yet most measures discussed in this article give the same weight to income taxes, which are usually progressive, as to sales taxes, which are usually regressive. Only the Citizens for Tax Justice tax burden ratio is designed to highlight regressivity, in this case, of sales taxes. Another policy issue obscured by having all taxes combined in a single measure is the relative importance of business and individual taxes in a state's total tax collections.

It's worth saying again that the tax rankings are not set in concrete. They change constantly, though not always significantly, as states and localities alter their tax systems and as the state and local economies fluctuate. This makes it even harder to compare states. A state with high ranking (comparatively high tax burden) according to a published report may have acquired a much higher comparative burden since the last publication of the ranking. In other words, if the rankings were computed on the basis of the latest data, the state could come out much lower.

Nevertheless inspection of the various tax ranking schemes alongside one another should aid in discussing the pros and cons of tax issues. This way, when a particular tax ranking is used as evidence in support of a particular position on a tax issue, all parties can understand exactly what is meant by the ranking. The fact that different organizations use different criteria may well reflect differences in priorities among those organizations with regard to what is the most important consideration when discussing taxes. In other words, two organizations can have completely different purposes for compiling their tax rankings.

As a matter of fact, there is no reason that two sides of a debate should agree on the significance of a tax burden ratio even if they do agree on the particular statistic. The Southwest Policy Institute, for example, accepts the ACIR measure of tax burden but evaluates it differently. While the ACIR publication of rankings tends to emphasize the denominator or tax base, Southwest Policy emphasizes the numerator or tax collections. The ACIR emphasis is on the capacity to reap taxes; the Southwest Policy emphasis is on the size of the tax bill. Roughly speaking, the ACIR views tax bases as an opportunity for a state to improve itself while Southwest Policy views taxes as an obstacle to economic progress. This difference in outlook is serious and therefore a legitimate matter for public debate. Such a debate will, however, be confusing and unproductive unless it is based on a careful understanding the differences among tax ranking schemes.

References

Advisory Commission on Intergovernmental Relations, *Measuring State Fiscal Capacity, 1988 Edition,* Washington, DC: U.S. Government Printing Office, August 1990, preliminary.

Citizens for Tax Justice, *Nickels & Dimes: How Sales & Excise Taxes Add Up in the 50 States,* Washington, DC: 1988, p. 5.

Government of the District of Columbia, *Tax Rates and Tax Burdens in the District of Columbia: A Nationwide Comparison,* Washington, DC, June 1989, pp. 10-13.

Grant Thornton Manufacturing Climates Study, Chicago: Grant Thornton, June 1989, pp. 161 and 168.

Hyde, John and Porter Davis, "Let's Stop Blaming the Oil Boom," Oklahoma City: Southwest Policy Institute, January 24, 1990.

Kerr-McGee Corporation, *State of Oklahoma House Bill No. 1017: Comparison of Tax Burden on Individuals Between Oklahoma and Other Mid-Continent States,* Oklahoma City, February 1990.

Tax Foundation, "Special Report: May 5 Tax Freedom Day Is Latest Ever," Washington, DC, April 1990.

Tritch, Teresa, "The Taxes You Can No Longer Ignore," *Money,* January 1990, pp. 82-83.

U.S. Department of Commerce, Bureau of the Census, *Government Finances in 1987-1988,* Washington, DC: U.S. Government Printing Office, January 1990, p. 101.

U.S. Department of Commerce, Bureau of the Census, *State Tax Collections in 1989,* Washington, DC: U.S. Government Printing Office, July 1990, p. 44.

Joseph T. Johnson is Senior Economist at the Center for Economic and Management Research and the Office of Business and Industrial Cooperation, The University of Oklahoma.

Center for Economic and Management Research
University of Oklahoma
Norman, Oklahoma 73019-0450

CONGRESSIONAL INFO. SERVICE/SRI
ATTN: ROBERTA B. MASON
4520 EAST-WEST HIGHWAY
BETHESDA MD 20814

Association for University Business and Economic Research
ABUER
MEMBER

EQUAL OPPORTUNITY STATEMENT

This institution in compliance with Title VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and other Federal laws and regulations does not discriminate on the basis of race, color, or national origin, sex, age, religion, handicap, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.